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U.S Department of the Interior
Bureau of Land Management

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Baker, Oregon 97814

Draft

March 1986

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Baker Resource Management Plan Environmental Impact Statement

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Draft
Baker Resource Management Plan
Environmental Impact Statement

Prepared by the Baker Resource Area of the Vale District
Bureau of Land Management
U.S. Department of the Interior
1986

William S. Jewell
State Director, Oregon/Washington

William C. Calkins
District Manager, Vale District

March 28, 1986

Dear Public Land User:

This draft Resource Management Plan/Environmental Impact Statement (RMP/EIS) for the Baker Resource Area of the Vale District is presented for your review and comment. It has been prepared in conformance with planning procedures established under the Federal Land Policy and Management Act of 1976.

This document describes four alternatives for managing BLM's public land in the Baker Resource Area. These alternatives primarily address land management issues that were identified during early stages of the planning process.

We would appreciate your comments on the adequacy of this RMP/EIS by July 14, 1986 for consideration in preparing the final Baker Resource Area RMP/EIS. Comments should be directed to Jack Albright, Area Manager, Baker Resource Area Office, 1550 Dewey, Baker, OR 97814. Comments received after the close of the comment period may be considered in the decision process, even though they will be too late to be specifically addressed in the final environmental impact statement.

Several informal public meetings will be held during the 90 day public comment period. The first public meeting will be held at Baker, Oregon on June 3, 1986, and other meeting dates and locations will be announced.

This draft document may be incorporated into the final EIS by reference. If so, the final RMP/EIS will consist of public comments, responses, and any needed changes of the draft. Therefore, please retain this draft copy for use with the final RMP/EIS.

The final RMP/EIS will identify the changes, if any, in the Preferred Alternative (Proposed Action). It should be considered a proposed decision at that time. It will be subject to a special review opportunity by the Governors of Oregon and Washington, and to protest by parties who may be adversely affected by the proposed plan.

Thank you for your participation in this planning process, and for your continuing interest in improving public land management in the Baker Resource Area.

Sincerely yours,

William C. Calkins

William C. Calkins
District Manager

Baker Resource Management and Environmental Impact Statement

Draft (X) Final ( ) RMP/EIS
Department of the Interior, Bureau of Land Management

1. Type of Action: Administrative (X) Legislative ( )

2. Abstract: This draft Resource Management Plan/ Environmental Impact Statement discusses Resource Management on 429,754 acres of public lands administered by the Bureau of Land Management in the Baker Resource Area of the Vale District. The Preferred Plan proposes to harvest timber on 25,353 acres with a sustained annual harvest level of 2.7 million board feet (MMBF); grazing management would continue on 50,397 acres of Section 15 grazing lands (111 grazing allotments); 50 miles of riparian zones would be prioritized for management based on their condition and need; wildlife and fish habitat would be maintained or improved throughout the planning area; 10,740 acres would be available for land tenure adjustment; 138,060 acres would be limited or closed to Off Road Vehicle use; 9 Special Management Areas totaling 38,988 acres would be designated as Areas of Critical Environmental Concern; cultural, soil, water, botanical, visual and recreational resources would be maintained or improved.

3. Four alternatives are analyzed:
   A. Continue Existing Management (No Action)
   B. Emphasize Commodity Production
   C. Emphasize Natural Environment Protection
   D. Preferred

4. The comment period will be 90 days, ending July 14, 1986

5. For further information contact:

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Bureau of Land Management
Baker Resource Area
1550 Dewey
Baker, Oregon 97814

SUMMARY

This draft Resource Management Plan/Environmental Impact Statement (RMP) identifies and analyzes four multiple use alternatives for managing public lands in the Baker Resource Area. The RMP is being prepared using the Bureau of Land Management planning regulations issued under the authority of the Federal Land Policy and Management Act of 1976 (FLPMA). Each alternative represents a complete, reasonable and implementable master-plan that provides a framework within which future, more site-specific decisions would be made.

The 1981 Ironside Rangeland Program Summary/Record of Decision (RPS) will continue to be implemented under all alternatives. The Ironside RPS established the grazing management program for 379,357 acres (located primarily in Baker County) administered for grazing under Section 3 of the Taylor Grazing Act. For these 'Section 3' lands, the Ironside RPS established livestock forage allocations, competitive forage allocations for wildlife, and riparian zone management objectives and practices. The second periodic Ironside RPS Update is included with this document for information purposes.

The Ironside RPS and Environmental Impact Statement did not address grazing management, competitive wildlife forage allocation or riparian zone management on 50,397 acres (located north of Baker County) administered for grazing under Section 15 of the Taylor Grazing Act. This Baker RMP establishes the grazing management and related programs for 'Section 15' lands in the planning area.

The Four Alternatives Are:

No Action (Current Management) Alternative

This alternative would maintain the present management under existing decisions of the Baker Management Framework Plan (1979), Grande Ronde Management Framework Plan (1976), Oil and Gas Management Program (1975), Timber Management Program for Eastern Oregon and Washington (1976) and several resource activity plans. Outputs from public lands and resources would generally continue at the present level.

1. Forage available for livestock on Section 15 lands would remain at the current level of 4,258 Animal Unit Months (AUMs).
2. Existing custodial management of riparian zones would continue on Section 15 lands.
3. On Section 15 lands, all forage on 3,700 acres within Cooperative Wildlife Management Areas (approximately 350 AUMs) would continue to be allocated to deer and elk.
4. About 20,000 acres of public land would be available for disposal pending site-specific study.
5. All public lands would remain open for locatable mineral exploration and development. A total of 22,215 acres (2.3 %) would be open to mineral leasing with "no surface occupancy" stipulation, and 25,145 acres (2.6%) would remain closed to leasing.
6. The 10-year sustained harvest level would be 28 Million Board Feet (MMBF) from 31,290 acres of commercial forest lands.
7. Current recreation facilities would be maintained within available funding.
8. The current Off Road Vehicle (ORV) designation would remain in effect, with 120,528 acres limited or closed to ORV use. All lands in the Blue Mountain and Grande Ronde Planning Units would remain open to ORV use, except the South Fork of the Walla Walla River which is now "limited".
9. No Special Management Areas (SMAs) would be designated. Unique values in possible SMAs would continue to be protected under existing authorities.

Commodity Production Alternative

This alternative would strive to maximize the utilization of resources and produce the greatest possible revenue. Conflicts would be resolved in favor of commodity resources.

1. Forage available for livestock on Section 15 lands could increase by 764 AUMs, to 5,022 AUMs.
2. Existing custodial management of riparian zones on Section 15 lands would continue.
3. On Section 15 lands, all forage on 3700 acres within Cooperative Wildlife Management Areas (approximately 350 AUMs) would be allocated to deer and elk.
4. An estimated 12,440 acres of public land would be available for disposal, pending site-specific study.
5. All public lands would remain open for locatable mineral exploration and development. A total of 3,360 acres (0.4 %) would be open to oil and gas leasing with a "no surface occupancy" stipulation. A seasonal oil and gas leasing restriction would apply to 14,825 acres (1.6 %) due to wildlife considerations.
6. The sustainable 10 year timber harvest level would be approximately 29 MMBF from a commercial forest land base of 26,026 acres.

7. Recreation sites would be redesigned to accommodate increased visitor use, pending available funding.
8. Approximately 122,820 acres of public land would be limited or closed to off-road vehicle use.
9. One SMA would be designated as an Outstanding Natural Area (ONA) and an Area of Critical Environmental Concern (ACEC). Unique values within other possible SMAs areas would be maintained under existing authorities.

Natural Environmental Protection Alternative

This alternative emphasizes maximum protection of natural values. Conflicts would be resolved in favor of protecting natural values.

1. Forage available for livestock on Section 15 lands would be reduced by 30 AUMs, to 4,228 AUMs.
2. Livestock grazing would be excluded from 6 miles of streams on Section 15 lands to protect riparian zones.
3. On Section 15 lands, All forage on 3700 acres within Cooperative Wildlife Management Areas (approximately 350 AUMs) would be allocated to deer and elk.
4. No public lands would be offered for sale.
5. Nearly all public lands would remain open for mineral exploration and development. A total of 1,680 acres (less than 1%) would be recommended for withdrawal from mineral entry. In addition, 34,508 acres (4.7%) would be open to oil and gas leasing with a "no surface occupancy" stipulation. Seasonal restrictions on oil and gas leasing would apply to 194,967 acres (20.8%) due to wildlife considerations.
6. The 10-year sustained harvest level would be approximately 23 MMBF from a commercial forest land base of 25,333 acres.
7. Recreation facilities would be maintained and redesigned to mitigate overflow damage and sanitary problems, pending available funding.
8. Approximately 142,380 acres of public land would be limited or closed to off-road vehicle use.
9. Twelve SMAs would be designatedas ACECs, including one ONA and one Research Natural Area (RNA). Unique values within other possible SMAs would be maintained under existing authorities.

Preferred Alternative

This alternative would provide for production of resources and protection of natural values. This alternative represents the Bureau's favored management approach.

1. Forage available for livestock on Section 15 lands would remain at 4,258 AUMs.
2. Riparian zones on Section 15 lands would be prioritized for management based on their need and potential. Riparian zone management would emphasize cooperative efforts with adjacent federal, state and private adjacent land owners.
3. All forage on 3700 acres within Cooperative Wildlife Management Areas (approximately 350 AUMs) would be allocated to deer and elk on Section 15 areas.
4. A total of 10,740 acres of public lands would be available for disposal pending site-specific study.
5. Nearly all public lands would remain open for mineral exploration and development. A total of 332 acres (less than 1 %) would be recommended for withdrawal from mineral entry. In addition, 18,955 acres (2%) would be open to oil and gas leasing with a "no surface occupancy" stipulation. A seasonal oil and gas leasing restriction would apply to 201,720 acres (21.5%) due to wildlife considerations.
6. The 10-year sustainable harvest level would be approximately 27 MMBF from a commercial forest land base of 25,353 acres.
7. Existing recreation facilities would be maintained or improved, as funding allows, to mitigate damage and sanitary problems associated with increased visitor use.
8. Approximately 138,060 acres of public land would be limited or closed to off-road vehicle use.
9. Nine SMAs would be designated as ACECs, including one ONA and one RNA. Unique values within other possible SMAs would be maintained under existing authorities.

Table 1 summarizes the environmental consequences of implementing each of the alternatives.

Table 1 Summary of Environmental Consequences and Comparison of Alternative Allocations

	Unit of Measure	Current Management (No Action)	Commodity Production Alternative	Natural Resource Protection Alternative	Preferred Alternative
Soil		0	-	+	+
Air		-	-	-	-
Water					
Quantity		0	-	+	+
Quality		0	-	+	+
Vegetation					
Ecological Condition		0	-	+	+
Plant Diversity		0	-	+	+
Threatened, Endangered or Sensitive Species (Protection)		0	0	+	+
Livestock Grazing (Section 15)					
Available Forage	AUMs	4,258	5,022	4,228	4,258
Riparian Zones					
Condition		0	-	+	+
Wildlife					
Terrestrial Habitat		0	-	+	+
Fish		0	-	+	+
Threatened & Endangered Species		0	0	+	+
Recreation					
Visitor Use Levels		0	+	-	+
Quality of Experience		0	+	+	+
Cultural Resources (enhancement)		0	0	+	+
Protection/Enhancement of Visual Quality		0	-	+	+
Forest Products					
Harvest Level	MMBF	2.79	2.85	2.29	2.65
Off-Road Vehicle					
Limited	Acres	119,560	121,802	138,042	141,262
Closed	Acres	968	1,118	1,118	1,118
Mineral Resouces					
Withdrawals	Acres	0	0	1,680	332
Locatable Minerals		0	0	-	-
Leaseable	Minerals				
Seasonal Stipulations	Acres	0	15,815	194,967	201,720
No Surface Occupancy	Acres	22,215	3,360	34,508	18,955
Closed to Leasing	Acres	25,145	14,825	14,825	14,825
Saleable Minerals					
Aggregate	# of Pits	1	24	1	24
Economic Activity		0	+	-	+
Change in Local Personal Income		0	+456,000	-102,000	-20,000
Special Management Areas					
Number of Areas		0	1	12	9
Protection of Values		-	-	+	+

0 = No Change + = Increase - = Decline

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Chapter 1
Purpose and Need

The Planning Area

This Resource Management Plan (RMP) addresses 429,754 acres of public land and an estimated 939,000 acres of subsurface mineral estate administered by the Bureau of Land Management (BLM).

The RMP consolidates three previously established planning units into one planning area, which is called the Baker Planning Area. The previous planning units were the Baker, Blue Mountain and Grande Ronde Planning Units.

BLM lands in the planning area are scattered throughout six counties in northeast Oregon (Baker, Malheur, Morrow, Umatilla, Union and Wallowa), and portions of two counties in the southeast portion of Washington State (Asotin and Garfield). Refer to Table 2 and Map 1. The general land pattern in the planning area is characterized by small to moderate sized parcels of BLM administered land that are widely scattered and intermingled with private land, state land, and land administered by the Forest Service (FS) and other federal agencies.

Table 2 Public Land Acreage, Baker Resource Area

County	Federal (BLM) Surface	Total Acreage of County
Section 3 Grazing Area[1]		
Baker	367,168	1,930,240
Malheur	10,046	12,040
Wallowa	2,143	2,033,920
Section 15 Grazing Area[2]		
Morrow	2,328	1,317,900
Umatilla	13,178	2,065,280
Union	6,119	1,200,480
Wallowa	18,328	above
Asotin[3]	10,374	109,235
Garfield[3]	70	3,320
Total	429,754	8,772,415

[1]Baker Management Area
[2]Grande Ronde and Blue Mountain Mangement Area
[3]Baker RA managed portion only

Most of the BLM land in the planning area is located in Baker and Malheur Counties (377,214 acres), where the largest and more closely blocked parcels occur. BLM lands in the six northern counties of the planning area total 48,943 acres, and generally occur in smaller and more widely scattered parcels.

BLM administered lands in the planning area are managed by the Baker Resource Area office of the Vale BLM district. The Baker Resource Area office is located in Baker, Oregon and the Vale BLM district office is located in Vale, Oregon. BLM lands in Asotin and Garfield Counties in Washington State are managed by the Baker Resource Area office under an interdistrict agreement between the Vale and Spokane BLM district offices.

The planning area is bordered by the Snake River to the east, the Columbia River and State Line to the north, and by Gilliam, Wheeler, Grant and Malheur Counties to the west and south (refer to Map 1 and Figure 1).

The Wallowa-Whitman National Forest, a portion of the Umatilla National Forest, the Hells Canyon National Recreation Area and the Umatilla Army Depot are other major federal lands within the boundaries of the planning area. The Umatilla Indian Reservation and Bureau of Reclamation lands are also within the planning area.

Purpose and Need

The Baker Resource Management Plan/Environmental Impact Statement will provide a comprehensive framework for managing and allocating public land and resources in the Baker Resource Area for the next 10 or more years. The RMP will serve as a master plan from which future, more site-specific analysis and decisions will be made regarding allowable, conditional or prohibited uses and activities.

More specifically, the RMP establishes:

- Resource condition goals and objectives;
- Allowable resource uses and levels of production;
- Areas for limited, restricted or exclusive resource uses;
- Areas for retention or transfer from BLM administration;
- Program constraints and general management practices;
- Specific management plans required;
- General resource monitoring standards.

This Resource Management Plan will supersede the 1979 Baker Management Framework Plan and the 1976 Grande Ronde Management Framework Plan. However, this RMP will not supplant the 1981 Ironside Rangeland Program Summary/Record of Decision (RPS), which was prepared for 379,357 acres in the planning area that are managed under Section 3 of the Taylor Grazing Act. These Section 3 grazing lands are located primarily in Baker County and the portion of Malheur County within the planning area.

The Ironside RPS resulted from a thorough analysis conducted in the Ironside Grazing Environmental Impact Statement. It will continue to provide the basic grazing management and forage use direction for Section 3 grazing lands in the planning area. The Ironside RPS will be modified only to the extent that it is affected by other resource decisions stemming from this RMP.

The second periodic update to the Ironside RPS is attached with this document. The Ironside RPS Update describes the status of the grazing management program on Section 3 grazing lands in the planning area.

This RMP/EIS will provide the basic grazing management direction and environmental analysis for 50,397 acres managed for grazing under Section 15 of the Taylor Grazing Act. These Section 15 grazing lands were not included in the Ironside RPS. They are located in the six northern counties of the planning area, and are scattered among 7 million acres of private land, state land and land managed by other federal agencies.

This RMP/EIS, in conjunction with the 1980 Ironside Grazing Environmental Impact Statement, is intended to satisfy for the Baker Resource Area the court-ordered requirement (U.S. District Court for the District of Columbia, ref. case No. 1983-73) for site specific grazing EISs on BLM administered grazing lands.

The Resource Management Planning Process

The Resource Management Planning Process involves nine interrelated steps, as shown in Table 3.

The Baker RMP was initiated in the winter of 1985, and the first six steps of the RMP process have been completed. Public involvement was solicited during planning steps numbers 1 and 2: the review of issues and development of planning criteria. Public review and comment was also requested during planning step number 5, when the resource

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VALE DISTRICT

Figure 1
General Location Map

- BLM State Office
- BLM District Office
- BLM Area Office
- District Boundary
- Planning Unit Boundary
- Environmental Impact Statement Boundary
- Baker RMP/EIS Area
- Ironsides Grazing Management EIS Area
- S Malheur Grazing Management EIS Area

Table 3 Resource Management Planning Process

1. Identification of Issues	Completed
2. Development of Planning Criteria	Completed
3. Inventory Data and Information Collection	Completed
4. Analysis of the Management Situation	Completed
5. Formulation of Alternatives	Completed
6. Estimation of Effects	Completed
7. Selection of a Preferred Alternative	
a. Draft RMP/EIS	Completed
b. Final RMP/EIS	September 1986
8. Selection of the Resource Management Plan	Winter 1987
9. Monitoring and Evaluation	Continuing

area published draft resource management alternatives for public comment.

This document represents planning step number 7a, development of the draft RMP/EIS, and is subject to a 90 day public comment period that closes July 14, 1986. The final Resource Management Plan/Environmental Impact Statement will be completed in September 1986. The final Resource Management Plan, Record of Decision, and Rangeland Program Summary will be published during early winter of 1986-1987.

Resource Planning Issues and Criteria

Public involvement was sought at an early stage in the RMP process to identify important issues that needed to be addressed by the management plan. A planning issue is an anticipated or known concern about the use or management of public lands or resources. Several specific issues were identified in public comments and by Baker Resource Area staff, and serve as the focus for this RMP/EIS.

After resource issues were identified, planning criteria were developed to guide how the issues would be addressed in the RMP. Planning criteria take into consideration resource laws, policy and regulations, and help the planning staff identify data needs, formulate land use alternatives, and evaluate and select a preferred alternative.

Following is a description of the primary planning issues and criteria considered in this RMP.

Topic: Lands and Access
Issue 1. Which lands in the resource area are suitable for disposal or acquisition to enhance management efficiency?

Planning Criteria:

a. Identify lands that are difficult to manage because of scattered, isolated patterns/or insufficient resource values.

b. Give emphasis to needs of other federal, state, and local government and communities for disposal lands.

c. Assign priorities to land tenure adjustments.

Issue 2. Which lands need legal access to enhance their management and use?

Planning Criteria:

a. Identify areas where access is lacking and areas where access is needed.

b. Assign priorities to access needs.

Issue 3. Which areas of public land would be suitable as right-of-way routes for major utilities, i.e., 69 KV or larger powerlines, six-inch or larger pipelines, railroads, and improved and maintained roads?

Planning Criteria:

a. Identify avoidance or exclusion areas.

b. Designate corridor or corridor segments based on existing facilities.

c. Designate communication sites (existing and proposed) that could be available for existing facilities.

Topic: Forest Management
Issue 1. Which forest lands and woodlands should be intensively managed for wood products and which should be managed principally to benefit other resources (i.e., watershed, wildlife, livestock grazing, etc.)?

Planning Criteria

a. Classify forest lands according to their timber production capabilities.

b. Consider other resource values as well as forest and woodland products.

c. Give overmature, diseased, or insect infected woodland and forest land stands highest priority for management.

d. Designate firewood cutting areas for public use (private or commercial).

e. The level of timber and woodland product sales

should not exceed the sustained yield harvest capability.

f. Assume all forest and woodland management practices will comply with state forest practice rules and meet water quality best management practices.

Topic: Mineral Resources
Issue 1. What areas of public land should be withdrawn from mineral entry?

Planning Criteria:

a. Identify public lands with potential for development of locatable minerals.

Issue 2. In what areas should mineral leasing be encouraged?

Planning Criteria:

a. Identify public lands that contain potentially valuable leasable mineral resources (i.e. coal, oil and gas).

b. Review the special and no occupancy stipulation areas associated with the Vale District Programmatic Environmental Analysis and determine if they need revision for the Baker Resource Area.

Issue 3. In what areas should mineral materials be developed?

Planning Criteria:

a. Identify areas suitable for management of mineral material disposal (i.e. decorative stone, riprap, sand and gravel, rock sources for aggregate, etc.), considering present and future demands and the needs of local governments and agencies.

b. Identify areas where mineral materials are readily available from commercial suppliers and determine if sales from public lands within those areas should be limited.

c. Review all material site rights-of-way in the Baker Resource Area for appropriate size and frequency of use. Also identify sites that would better serve the public as free use permits or community pits.

d. Identify and prioritize mining disturbed areas for reclamation.

e. Insure that reclamation meets federal and state requirements.

Topic: Rangelands
Issue 1. What should BLM's grazing management program be for lands managed under Section 15 of the Taylor Grazing Act, and located primarily in the Blue Mountain and Grande Ronde management areas (Morrow, Umatilla, Union, Wallowa, and Baker Resource Area managed portions of Garfield and Asotin counties)?

Planning Criteria:

a. Allocate vegetation for livestock, wildlife, watershed protection, scenic quality, threatened and endangered species, and other multiple use considerations.

b. Identify changes or additional range management practices needed to achieve other resource objectives identified in the RMP.

Topic: Recreation
Issue 1. In what areas should recreation activities be the predominant use, considering projected recreation demands within the area, visitor and resource protection capability, public access, and compatibility with other uses?

Planning Criteria:

a. Emphasize resource dependent recreation activities rather than those that are more dependent on facilities (except in areas of identified health and safety needs).

b. Use visitor information/interpretation to enhance recreation experiences, promote safety, reduce user conflicts and protect resource values.

c. Provide access to natural and recreational areas where appropriate.

d. Consider the effectiveness of the current ORV plan and use designations, and if it should be changed to improve management.

Issue 2. How should the public land fronting the Grande Ronde River in Wallowa and Asotin counties be managed to protect the river's outstanding natural values.?

Planning Criteria:

a. Determine the need for developing or establishing access points.

b. Consider the demand and use for the various resource uses on the river, given the need for protecting and maintaining the quality of the resource.

Topic: Special Management Area Designations
Issue 1. What areas on the public lands special management attention to protect important historic, cultural or scenic values, fish and wildlife resources or other natural systems or processes, or to protect people from natural hazards?

Planning Criteria:

a. Consider potential sites for designation as Areas of Critical Environmental Concern (ACEC), Research Natural Areas (RNA), or Outstanding Natural Areas (ONA).

b. Identify areas having threatened and endangered plant and animal species, endemic vegetation communities, and important cultural, scenic, paleontological and wildlife resource values.

c. Evaluate the potential for managing sites through multiple use constraint prescriptions as well as through designation.

Issue 2. How can the remaining segments of the Oregon Trail on public lands be protected?

Planning Criteria:

a. Emphasize cooperative management with local and special interest groups.

b. Give priority to information/interpretation facilities for protection of the trail.

c. Evaluate potential for management through multiple use, special designations, and National Park Service management policy and plan recommendations.

Topic: Fire Management
Issue 1. Where, when and under what circumstances should BLM use prescribed fire through planned and unplanned ignitions as a management tool?

Planning Criteria:

a. Coordinate all suppression, presuppression, and prescribed fire activities with other resource concerns to insure maximum benefits or protection.

b. Identify areas where a suppression policy should be established, using criteria such as fuel types, resource values, access, ownership, and adjacent landowner policies (federal and state).

c. Propose management of fires or initiation of prescribed burns to maintain natural ecosystems or to manipulate vegetation types.

Topic: Riparian Areas
Issue 1. How should BLM manage riparian zones on Section 15 grazing lands to benefit wildlife, fisheries, livestock grazing, visual resources, and water quality and quantity.

Planning Criteria:

a. Identify riparian areas in need of management that affect anadromous fisheries and/or crucial wildlife habitat, livestock grazing and water quality.

b. Recommend management practices that would protect, maintain or enhance riparian zones.

Topic: Wildlife Habitat
Issue 1. How should BLM manage habitat to meet wildlife needs?

Planning Criteria:

a. Identify important habitats, and their condition and carrying capacity.

b. Classify lands according to their value as habitats.

c. Implement management systems in cooperation with the Oregon Department of Fish and Wildlife, Washington Department of Game or other agencies to protect, maintain and enhance habitats managed by BLM.

Issues Eliminated from Detailed Study:

Wilderness

Wilderness will not be addressed as an issue in the RMP because wilderness designation is the subject of a separate study and environmental analysis process that was started before the RMP was scheduled. The Bureau of Land Management's Oregon Statewide Wilderness Environmental Impact Statement addresses the Sheep Mountain Wilderness Study Area (WSA) and Homestead WSA. A portion of the McGraw Creek WSA was designated as wilderness through passage of the Oregon Wilderness Act of 1984. The balance of the McGraw Creek WSA, not designated as wilderness, will be addressed in a supplement to the Draft Oregon Wilderness EIS.

Coal Leasing

The planning area is not in a coal production area and no federal coal leasing will result from this plan. Any potential federal coal leasing would be guided by the federal coal management regulations (43 CFR 3425). Under these regulations, interested parties apply for a coal lease to the BLM Oregon-Washington State Office in Portland. The area applied for would be studied for acceptability utilizing

four planning screens, which are: (1) verification of coal development potential; (2) application of the 20 unsuitability criteria; (3) surface owner consultation (for split-estate lands); and (4) multiple-use trade-offs involving other resource values compared to coal.

Application of these screens would constitute an amendment to this RMP and would be subject to gubernatorial and public review. Areas studied would be designated as acceptable or non acceptable for further consideration for leasing. Assuming that some areas were found to be acceptable (with or without additional stipulations on mining and reclamation), the applicant maintains interest, and evidence of surface owner consents were provided, then these lands could be offered for competitive lease by the Secretary of the Interior.

Coal operators must comply with all federal and state laws and regulations dealing with coal mining and reclamation.

Interagency and Intergovernment Relationships

Interagency coordination between the BLM and other federal agencies, state governments, local governments and Indian tribes is required under Bureau planning regulations (43 CFR, Part 1610.3), and by several cooperative agreements or memoranda of understanding. The following discussion summarizes these relationships.

1. Federal Agencies

The Wallowa-Whitman National Forest and portions of the Umatilla National Forest administered by the U.S. Forest Service (FS) occur within the planning area boundaries. The BLM and FS strive to achieve similar resource management goals on adjoining BLM and FS lands. At the present time the BLM and the FS are proposing a land interchange that would transfer most of the public lands administered by BLM in the planning area to the FS. The land management decisions that are committed in this plan would continue to be implemented under FS administration.

A few of the livestock operators now using public land also graze livestock on FS administered lands. In these cases, the FS manages livestock grazing on some BLM lands and BLM manages livestock grazing on some national forest lands through cooperative agreement.

The Grande Ronde River is cooperatively managed by the BLM and the Forest Service under a memorandum of agreement. Commercial river permits are administered by the Forest Service with a percentage of the user fees redistributed to the BLM. The Department of the Interior has included the Grande Ronde River in the Nationwide Rivers Inventory, which means that the river qualifies for further study for wild and scenic river eligibility. The BLM is required to manage its lands along the Grande Ronde River in a manner that would maintain their eligibility for wild and scenic river consideration.

Also under cooperative agreement the BLM, FS and the Oregon Department of Fish and Wildlife (ODFW) are protecting a bald eagle nesting site near Unity Reservoir. This effort is related to BLM's cooperation in the Pacific Bald Eagle Recovery Plan, in which the participants have agreed to locate and protect bald eagle habitat.

The BLM, FS and ODFW have also entered into a cooperative agreement to introduce mountain goats in the Elkhorn Range.

The BLM has working relationships with many other agencies involved with resource management or resource concerns. BLM has worked closely with the U.S. Soil Conservation Service in developing coordinated resource management plans and collecting resource data. The BLM and the Bonneville Power Administration (BPA) coordinate common interests in water resources and utility corridors through a memorandum of understanding. The BLM, the BPA and the Northwest Power Planning Council (NPPC) are involved in stabilization and improvement of riparian zones, anadromous fish habitat and aquatic habitat through grants provided by BPA.

2. State and Local Governments

The BLM, Oregon Department of Fish and Wildlife (ODFW) and Washington Department of Game (WDG) work closely on common resource development and protection interests. The ODFW and BLM have also signed cooperative agreements on five Wildlife Management Areas. The WDG and BLM have signed a cooperative agreement on one Wildlife Management Area. Table 4 identifies and describes these agreements.

The Oregon Department of Forestry (ODF), through administration of the Forest Practices Act of 1972, regulates timber harvest operations and supportive practices on all nonfederal lands within the planning area. The BLM has entered into a memorandum of understanding with the State Department of Environmental Quality on minimum standards for

Table 4 BLM/State Cooperative Wildlife Management Areas

	County	Purpose	Total Acres	BLM Acres	State Acres	FS Acres
Oregon			57,099	2,860	24,729	28,590
1. Auburn	Baker	Elk Management	3,200	1,410	1,670	120
2. Wenaha	Wallowa	Elk Management	39,334	1,330	10,004	28,000
3. Little Sheep Crk	Wallowa	Mule Deer/Upland Game, Fish Management	540	40	30	470
4. Bridger Crk	Umatilla	Elk Management	13,105	80	13,025	0
5. Power City	Umatilla	Waterfowl, Non-game Management	100	100	0	0
Washington						
1. Chief Joseph	Asotin	Big Horn Sheep, Elk, Deer, Upland Game	9,462	2,370	7,092	0

the following forest practices:

- Timber harvest
- Reforestation
- Road construction and maintenance on forested lands
- Chemical applications
- Slash disposal
- Maintenance of streamside buffers

The consistency of the alternatives analyzed in this plan with the basic objectives of the State of Oregon's forestry and wildlife programs are presented in Table 5.

The BLM cooperates with soil and water conservation districts to establish mutual goals and to gather and share natural resource information. Cooperation with appropriate weed control districts also occurs to deal with infestations of noxious weeds.

BLM also consults with the State Historic Preservation Offices of Washington and Oregon prior to any activities that might adversely affect cultural resources. This consultation process strives to determine the effects of proposed projects on cultural resources, and to develop appropriate mitigation measures when adverse impacts cannot be avoided.

Under Section 202 of the Federal Land Policy and Management Act, all BLM plans must be as consistent as possible with resource related plans, programs and policies that have been officially approved or adopted by state and local agencies. Lands in Baker, Wallowa, Union, Malheur, Morrow and Umatilla counties are included in the Baker Planning Area. With the exception of Baker County, the comprehensive plans for these counties have been acknowledged by the Oregon Land Conservation and Development Commission and are in conformance with statewide planning goals and objectives. Most BLM lands are in "exclusive farm use"or "forestland" zones. Proposed BLM land uses are compatible with the county plan guidelines for these zones, including emphasis on natural values, livestock grazing, forest practices, including timber harvest, cultural, visual and recreation resource protection or enhancement.

The county plans in Oregon and Washington vary on minimum lot size for residences. The sale of small parcels of public land would not violate county plans because the new owners would still be subject to county zoning requirements in obtaining building permits. Table 6 shows the relative consistency of each alternative with Oregon county plans and programs.

3. Individuals and Groups

Private lands comprise about 40 percent of the surface ownership, or about 4 million acres within the planning area boundaries. Management coordination is therefore essential if the intermingled tracts of BLM lands are to be managed properly. When the BLM has primary management responsibilities, activity plans will normally be sufficient to assure coordination with adjacent landowners. In areas with multiple ownership, the development of cooperative management plans could provide a better resolution of multiple resource objectives. Cooperative management plans could involve several agencies and a variety of landowners.

Table 5 Consistency of the Alternatives With State of Oregon Wildlife Goals and Basic Objectives of the Forestry Program for Oregon[1]

Wildlife Goal	**Discussion**
1) To maintain all species of wildlife at optimum levels and prevent the serious depletion of any indigenous species.	The Preferred and Natural Environment Protection Alternative fully meet the first part of this goal. The Commodity Production Alternative would not meet this goal for all species. However, all alternatives meet the second part which is to prevent serious depletion of any indigenous species.
2)To develop and manage the lands and waters of the State in a manner that will enhance the production and public enjoyment of wildlife.	The No Action and Commodity Production Alternatives would maintain the current habitat without any planned developments. The Preferred and Natural Environment Protection Alternatives provide for habitat improvements for upland, riparian and aquatic habitats.
3) To regulate wildlife populations and the public enjoyment of wildlife in a manner that is compatible with primary uses of the land and waters of the State and provides optimum public recreation benefits.	The Preferred and Natural Environment Protection Alternatives are consistent with the objective by improving habitat diversity and increasing wildlife species diversity, which would enhance the quality of public enjoyment of wildlife. The Commodity Production and No Action Alternatives would maintain the existing situation.
4) To develop and maintain public access to the lands and waters of the State and the wildlife resources thereon.	All alternatives would be consistent with the goal in developing or maintaining public access although wildlife disturbances would occur and some ORV restrictions are proposed.
5) To permit an orderly and equitable utilization of available wildlife.	All alternatives are consistent with this objective. Limited access and ORV use could restrict opportunities into areas under all alternatives.
Basic Forestry Objectives	**Discussion**
To maintain the maximum commerical forest and base consistent with resource uses while assuring environmental quality.	All alternatives are consistent with the commercial forest land base (suitable for timber production) benchmark of approximately 29,330 acres. Environmental quality protection measures would meet or exceed requirements of the Oregon Forest Practices Act.
To maintain or increase the allowable annual harvest level to its fullest potential to offset potential socioeconomic impacts.	All alternatives except the Natural Environment Protection Alternative consistent with the annual sustainable harvest benchmark of about 2.75 Mmbf.
To identify and implement the levels of intensive forest management required to achieve maximum growth and harvest.	The level of harvest the land base can sustain is dependent on the productivity of the land, the level of management the land base receives, and the number of acres allocated to other resource values. All alternatives except the Natural Environmental Protection Alternative would allow for a full range of intensive timber management practices to get maximum timber production. New and improved practices would be used, consistent with technological advances.
To maintain community stability by remaining flexible for increase in future harvest levels that would offset projected shortages.	Annual harvest levels ranging between 2.29 and 2.85 Mmbf would not affect community stability within the planning area. The allowable cut is seldom taken from the same county in successive years.

[1]Based on the Oregon State Department of Forestry, Forestry Program for Oregon published in 1977 and updated in 1982

Table 6 Relationship of the Preferred and Other Alternatives to County Comprehensive Plans as they Incorporate and Reflect Oregon Statewide Land Conservation and Development Goals[1]

LCDC Statewide Goal Number and Description	Discussion
1. To ensure citizen involvement in all phases of the planning process.	BLM's land use planning process provides for public input at various stages. Public input was specifically requested in developing the Preferred Alternative, other alternatives, issues, and planning criteria described in the RMP/EIS. Public input will continue to be utilized in the environmental analysis process and development of the final RMP.
2. To establish a land use process and policy framework as a basis for all decisions and actions.	The Preferred Alternative and other alternatives have been developed in accordance with the land use planning process authorized by the Federal Land Policy and Management Act of 1976, which provides a policy framework for all decisions and actions.
3. To preserve and maintain agricultural lands.	The majority of public lands in the planning area are not suitable for intensive agriculture. All alternatives except the Natural Environment Protection Alternative provides for the continued use of small tracts of public lands for intensive agricultural either through lease or land sales. Public lands transferred to private ownership are subject to existing county plans and building permit requirements.
4. To conserve forestlands for forest uses.	The forest lands in the planning area will be managed for forest uses consistent with multiple use goals. The Commodity Production and Preferred Alternatives would not significantly change the amount of wood products from the current level. The Natural Environment Protection Alternative would significantly reduce the production of wood products.
5. To conserve open space and protect natural andscenic resources.	Natural and visual resources were considered in the development of all alternatives. Forest product sales, forest development, mineral development, fencing and vegetation manipulation projects under all alternatives would impact open space as well as natural and visual resources. Adverse impacts to visual resources, wildlife habitat, and unique natural areas would be greatest under the Commodity Production Alternative and least under the Natural Resource Protection and Preferred Alternatives.
6. To maintain and improve the quality of the air, water and land resources.	The Federal and State minimum water quality standards would be met and water quality would be maintained and/or improved under all alternatives. Prescribed burning is proposed under all alternatives and would have a slight temporary affect on air quality at upper atmospheric levels. All alternatives would comply with the statewide smoke management plan.
7. To apply appropriate safeguards for floodplains and natural hazard areas.	The standards for proposals including review, acceptance, or modification in areas subject to landslide are such that this hazard would be avoided or reduced. Proposals in floodplains would be subject to Floodplain Management Executive Order No. 11988 of 1977.
8. To satisfy the recreational needs of the citizens of the State and visitors.	The BLM actively coordinates with other agencies to establish integrated recreation management objectives on a regional basis. Under the Preferred Alternative and all other alternatives, opportunities would be provided to meet recreational needs. The quantity of recreational opportunities would be greatest under the Commodity Production and Preferred Alternatives. Highest quality recreation needs would be provided under the Natural Environment Protection and Preferred Alternatives.
9. To diversify and improve the economy of the State.	All alternatives would induce economic stability or gains in the long term through livestock forage production, wildlife habitat improvements, mineral exploration and timber harvesting. This would result in a slightly improved local and State economy.
13. To conserve energy.	Conservation and efficient use of energy sources are objectives in all BLM activities. Use of cull logs and slash for chips and firewood is encouraged. Sale and harvest of minor forest products (e.g. posts, poles, firewood) from woodlands and non-commercial forest areas is permitted in most areas.

[1]Statewide goals 10, 11, 12 and 14 are not generally applicable to all alternatives. Goals 15-19 are not applicable to the counties with the Baker Resource Planning Area.

4. Coordination and Consistency with Other BLM Plans

The Ironside (RPS) was completed in 1981. The alternatives in this draft Baker RMP/EIS are consistent with the decisions contained in the Ironside RPS. The second periodic update to the Ironside RPS is included with this document, and describes the status of the grazing management program cn Section 3 grazing lands in the planning area.

Following completion of the RMP/EIS and subsequent Record of Decision, the district and area offices will coordinate site-specific planning and activities with the adjacent Burns, Spokane and Prineville BLM districts.

5. Relationship to Tribal Treaties

The majority of the planning area was ceded to the United States through ratified treaties with the Nez Perce, Confederated Tribes of the Umatilla and Confederated Tribes of Warm Springs. These treaties reserve to the Indians the right for hunting, fishing and gathering in usual and accustomed places, and grazing stock on unclaimed land. These treaties, together with the Native American Religious Freedom Act of 1978, require BLM to protect various tribal interests in or on non-reservation lands.

Contemporary Native American interests in the area include the protection of Indian burial grounds and the perpetuation of certain traditional activities, particularly root gathering, hunting and fishing. According to early historic and published records, traditional subsistence use localities occurred within the planning area along major rivers and their tributaries. The current status of use of specific sites on BLM lands by contemporary Native Americans is unknown.

Chapter 2
Affected Environment

Introduction

This chapter describes the physical and economic characteristics of the planning area. Emphasis is placed on resource conditions that could be affected by BLM management alternatives described in Chapter 3.

The information in this chapter is drawn from the Unit Resource Analysis for the Grande Ronde and the Baker Planning Units, and from resource data and inventories that have been gathered over the last 10 years. These planning documents and resource inventories are available for review in the Baker Resource Area Office. Other sources have also been referenced as appropriate.

Climate

Climate within the planning area is temperate to semi-arid. Temperature and precipitation vary considerably between mountain and valley regions, with greater precipitation and lower temperatures occurring at higher elevations. Annual precipitation ranges from 8 inches in valley areas to 80 inches in mountain regions.

Winters are generally long, cold and moist. In major valley areas, such as around Baker and LaGrande, average January temperatures range from 24 to 32 degrees fahrenheit. As much as 65 percent of the annual precipitation occurs during winter. Annual snowfall averages 35 inches in the valleys and 200 inches in the mountains.

Summers in the valley areas generally last from May to September, and are warm and dry. Average valley summer temperatures range from 61 to 64 degrees fahrenheit. From 8 to 12 percent of the annual precipitation occurs during summer, often as isolated but intense afternoon thunderstorms. The average growing season ranges from 60 days in the mountains to 180 days along the Snake River. The growing season in the major valleys averages 120 days.

Soils

Soils in the planning area are extremely diverse due to variations in elevation, topography, aspect, climate and parent material. Soil surveys have been published by the Soil Conservation Service for Morrow, Baker, Garfield, Union, Wallowa and Umatilla counties, see Appendix A for the soil characteristics summary for each county. Asotin County has been surveyed and a published soils report should be available in 1987. A new soil survey for Baker County will be published during 1986.

Soil conditions are generally stable throughout the resource area, although several areas of concern have been identified. About 158,000 acres of BLM administered land in the planning area are classified as fragile soils having high to severe erosion potential (see Table 7 and Map 2). These are generally sandy and loamy sand soils that are highly susceptible to wind and water erosion, but are not necessarily undergoing accelerated erosion at this time.

Localized severe soil erosion has occurred in the bottomlands of several watersheds, and severe erosion is occurring in the Virtue Flats Off Road Vehicle Area. Soil erosion is accelerated in rangeland areas that are in fair or poor ecological condition. The vegetation in these areas consists predominantly of annual plants, which are not as dependable as perennial plants in providing soil stability. Annuals tend to fluctuate in abundance yearly as precipitation and temperatures vary, and are particularly susceptible to environmental stress, such as drought.

Water

Substantial amounts of BLM land occur within the watersheds of seven major river systems in the planning area: the Columbia, Snake, Grande Ronde, Umatilla, Powder, Walla Walla and Burnt Rivers.

The average daily flows in cubic feet per second for these rivers are:

Columbia (at McNary Dam)	187,400 cfs
Snake (at Oxbow)	16,400 cfs
Grande Ronde	3,179 cfs
Umatilla (at Pendleton)	507 cfs
Powder	257 cfs
Walla Walla	179 cfs
Burnt	134 cfs

Peak flows generally occur during May and June and are associated with snowmelt and spring precipitation. Low flows occur in late summer during the period of least precipitation and highest demand for irrigation.

Flows on all of these rivers except the Walla Walla are affected to some extent by irrigation or hydroelectric impoundments. These major systems are fed by hundreds of smaller streams and springs.

Developed water sources on BLM land include 113 reservoirs, 391 springs, 3 livestock water catchments and 12 wells.

Ground water occurance is highly variable, but occurs in alluvial fills associated rivers and creeks. Ground water also occurs in Columbia River basalts and associated sedimentary interbeds. Major aquifers have not been identified, and known aquifers are basically non-continuous.

Surface water quality is affected primarily by return flows from agricultural lands. Sediment and agricultural chemicals account for most of the pollutants.

Table 7 Acreages of Fragile Soils in Planning Area[1]

County	Total BLM Acreage	Soils Having High to Severe 163,107 Acres	Precent
Baker	367,168	115,379	31
Malheur	10,046	5,600	56
Morrow	2,328	1,210	52
Umatilla	13,178	9,580	73
Union	6,119	4,820	79
Wallowa	20,491	16,820	82
Asotin (Washington - Area of BLM Responsibility)	10,374	9,698	93
Garfield (Washington - Area of BLM Responsibility)	70	0	
Total	429,754	163,107 Acres	38

[1]See also Map 5 and Appendix

Air Quality

National ambient air quality standards limit the total allowable amounts of specific pollutants. These standards were established to protect public health (primary standards) and public welfare (secondary standards). The ambient air quality standards near towns in northeast Oregon are occasionally exceeded due to winter temperature inversions, woodstove exhaust, and seasonal agricultural and industrial practices.

Under the Clean Air Act Amendments of 1977, areas have been classified according to the additional amounts of air quality degradation that are allowable. Class I areas have the greatest limitations and virtually no degradation of air quality is allowed. In Class II areas controlled growth and moderate impacts to air quality can occur. Class III areas are those that allow the greatest degree of impacts to air quality.

Two Class I airsheds occur within the Baker Planning Area: the Hells Canyon National Recreation

Area and the Eagle Cap Wilderness Area. The remainder of the planning area is classified as a Class II airshed.

The BLM does not presently have smoke management regulations for this area. However, smoke management is considered during the planning process for all prescribed burns. During most of the year smoke from burns dissipates rapidly.

Vegetation

Vegetation Types

Most of the planning area lies within the Blue Mountains physiographic region, while a small area in the northwest portion is included in the Columbia Basin physiographic region.

The planning area contains a complex mix of vegetation that is the product of widely varying elevations, topography, climate, soils and land use patterns. The existing plant communities have been classified into 18 vegetation types (see Appendix B), ranging from low elevation desert shrub and grassland types to high elevation coniferous forest and subalpine communities.

Most of the BLM administered land in the planning area contains perennial grass, big sagebrush/bunchgrass, big sagebrush/annual grass and mixed shrub plant communities that occur on mid and lower elevation intermountain rangelands.

Ecological condition has been evaluated on 85 percent of the 379,357 acres of public land that are administered for grazing under Section 3 of the Taylor Grazing Act. These rangeland condition classifications describe how closely the present plant community on a range site resembles the potential climax plant community for that site (refer to Table 8).

Ecological condition data has not been gathered on the 50,397 acres of BLM land that are managed for grazing under Section 15 of the Taylor Grazing Act.

Riparian Vegetation

Approximately 240 miles of major perennial streams occur in the planning area. About 80 percent of these riparian zones along these streams have been inventoried (see Table 9). Most of the inventoried habitat is in good or fair condition and is in static trend.

About 50 miles of these perennial streams occur on BLM lands, located primarily north of Baker County, that are administered for livestock grazing under Section 15 of the Taylor Grazing Act. This RMP specifically addresses management of the riparian zones on Section 15 grazing areas. Table 10 describes the inventory status, condition and trend of riparian vegetation along perennial streams in Section 15 grazing areas.

Table 8 Ecological Condition and Trend on Section 3 Lands, Baker Management Area

Climax (Acres)	Late (Acres)	Middle (Acres)	Early (Acres)	No Status (Acres)
9,682	86,155	108,114	116,307	61,190

Apparent Trend

Upward (Acres)	Static (Acres)	Downward (Acres)
142,720	184,482	41,945

This RMP does not address the 190 miles of perennial streams that are located on Section 3 grazing lands (primarily Baker County). Riparian vegetation on Section 3 lands will continue to managed according to the 1981 Ironside RPS (see Purpose and Need, Chapter 1).

Riparian vegetation also occurs along an additional 160 miles of intermittent streams. Most of the intermittent streams are located on Section 3 grazing lands. Riparian vegetation along intermittent streams has not been inventoried.

Riparian zones are generally 30 feet wide or less, cover an average of 4 acres per linear mile, and comprise less than 1 percent of the total BLM managed land. Although small in area, riparian zones are critically important because they are a source of biological diversity and are considered the lifeline of biological systems in the region.

Threatened, Endangered, Sensitive and Special Status Plant Species

Twenty four plant species listed as endangered, threatened or sensitive in Oregon by the Oregon Natural Heritage Data Base are known or are suspected to occur in the planning area. These are listed on Table 11. Of these, 13 plant species are either candidates for Federal listing or are currently listed (1985 Federal Register).

Table 9 Condition and Trend for Inventoried BLM Riparian Habitat

Area	Miles of Riparian (Perennial)	Miles of Riparian Inventoried	Riparian Condition (Miles)[1] E	G	F	P	Riparian Trend (Miles)[2] U	S	D
Baker	190	95	4	37	47	7	22	60	13
Grande Ronde - Blue Mtn.	50	40	12	22	6			40	
TOTAL	240	135	16	59	53	7	22	100	13

[1]E = Excellent, G = Good, F = Fair, P = Poor
[2]U = Up, S = Static, D = Down

Table 10 Condition and Trend for Inventoried Riparian Zones Along Perennial Streams, Section 15 Lands

	Miles of Riparian	Miles of Inventoried	Riparian Condition (Miles) E	G	F	P	Riparian Trend
Wallowa River	1	1		1			
Sickfoot Creek	2	2			2		S
Grande Ronde R.	21	21	2	17	2		S
Wildcat Cr.	2	21	2				S
Wallupa Cr.	2.5	2	2.5	2.5			S
Joseph Cr.	9.5	5	5				S
Little Sheep Cr.	.5						
S. Fork Walla Walla R.	2	2	2				S
Cable Cr.	5	3	1		2		S
N. Fork John Day R.	3						
Wenaha R.	1.5	1.5	1	.5			S
Total	50	40	12	22	6		

E = Excellent
G = Good
F = Fair
P = Poor
S = Stable

Forest Land

Commercial Timberlands

An intensive forestland inventory completed in 1985 identified 29,330 acres suitable for commercial timber production. This acreage is less than was determined by previous inventory due to a land transfer to the Hell's Canyon National Recreation Area and the use of revised inventory techniques.

Of the suitable commercial forest land, 3,304 acres are in locations where timber values will not support an economic harvest with current equipment. The remaining 26,026 acres are considered to be available for sustained commercial timber production before land use allocations for other resources.

About half of the commercial forest land is located in Baker County, with significant amounts occurring in Umatilla, Union and Wallowa Counties. Refer to Table 12 and Map 2 for the location of commercial forestlands.

Areas of commercial timber are generally located in scattered tracts at lower and mid-elevations, and between private lands on valley floors and National Forest at higher elevations. Notable exceptions are Hunt Mountain, Pedro Mountain and Big Lookout Mountain.

Table 11 Threatened, Endangered or Sensitive Species

Scientific Name	Common Name	State Status[1]	Federal Status[2]
Animals			
Haliaeetus leucocephalus	Bald Eagle	2	1
Buteo swainsoni	Swainson's Hawk	3	2
Buteo regalis	Ferruginous Hawk	-	2
Centrocercus urophasianus	Western Sage grouse	-	2
*Tympanuchus phasianellus columbianus	Columbian Sharp-tailed grouse	2	-
Numenius americanus	Long-billed curlew	-	2
Plecotus townsendi townsendi	Townsend's western big eared bat	1	2
*Recently extirpated in Oregon			
Plants			
Allium madidum	Swamp onion	3	-
Allium robinsonii	Robinson's onion	2	3c
Arenaria franklinii var. thompsonii	Thompson's sandwort	1	2
Astragalus diaphanus	Transparent Milk-vetch	1	2
Astragalus kentrophyta var. douglasii	Douglas Milk-vetch	1	2
Astragalus tegetarioides	Deschutes Milk-vetch	1	-
Balsamorhiza rosea	Rosy balsamroot	2	3c
Bupleurum americanum	Bupleurum	2	-
Collomia macrocalyx	Bristle-flowered collomia	3	2
Erigeron englemannii	Engelmann's daisy	2	-
Geum rossii	Slender-stemmed avens	2	-
Haplopappus radiatus	Snake River goldenweed	1	2
Leptodactylon hazelae	Hazel's prickly-phlox	1	-
Lomatium greenmanii	Greenman's lomatium	1	1
Lomatium laevigatum	Smooth desert parsley	3	2
Lomatium oreganum	Oregon lomatium	1	2
Lomatium rollinsii	Rollin's lamotium	1	2
Mimulus clivicola	Bank monkey flower	1	-
Mimulus washingtonensis	Washington monkey flower	1	-
Rorippa columbiae	Columbia cress	1	2
Salix bebbiana	Bebb's willow	2	-
Silene scaposa var. scaposa	Scapose catchfly	1	2
Silene spaldingii	Spalding's campion	1	2
Thelypodium eucosmum	Arrow-leaf Thelypody	1	2

1. From "Rare, Threatened, and Endangered Plants and Animals of Oregon, Oregon Natural Heritage Data Base, March 1985
   1. Endangered or threatened throughout range
   2. Endangered or threatened in Oregon
   3. Limited in abundance but currently stable

2. From Federal Register Sep. 18 & 27, 1985

   Category 1. Proposed for listing
   2. Candidate for listing
   3c. More widespread than originally thought

Table 12 Acres of Commercial Forestland By County[1]

County	Commercial Forest Acres
Baker	16,339
Umatilla	3,060
Union	3,972
Wallowa	5,214
Morrow	574
Asotin (WA)	138
Garfield (WA)	33

[1]Woodlands are currently being inventoried and data will be included in the draft RMP/EIS

Commercial species include ponderosa pine in dry areas and on south facing slopes; mixed conifer stands of Douglas fir, grand fir, western larch and Englemann spruce in wet areas and on north facing slopes; and lodgepole pine at higher elevations. Ponderosa pine is the predominant species on 14,137 acres, while Douglas Fir and mixed conifers occupy 15,193 acres.

Timber stands are commonly multi-storied and uneven aged. Refer to Table 13 for a display of

Table 13 Acres of Suitable Commercial Forestland By Predominant Size Class

Size Class	Diameter (Dbh) Inches	Height Feet	Percent Crown Closure	Acres
Seedlings saplings	0-4.9"	10'	less than 40%	0
			more than 40%	0
Poles	5.0-8.9"	11-40'	less than 40%	2028
			more than 40%	1730
Small sawtimber	9.0-20.9"	41-80'	less than 40%	8359
			more than 40%	7127
Large sawtimber	21" +	81' +	less than 40%	3755
			more than 40%	5573
Non-stocked			less than 40%	704
Total				29,330

acreage by timber size class. Site quality ranges from low to moderate. Table 14 indicates acreage by cubic foot site class.

Many of the dryer forest sites at lower elevations support stands of high quality, old-growth ponderosa pine. Demand for timber from these areas has remained high despite the recent general decline of the northwest wood products industry. This is due, in part, to the desire for antiqued pine furniture, mouldings, paneling, and other specialty items manufactured from ponderosa pine. Less snow, longer operating seasons, flatter topography and reduced equipment requirements also help maintain the demand for these lower elevation timber sales.

Several higher elevation mixed conifer stands have been previously logged by operations that harvested only the most desirable material. To a large extent the remaining timber is small, diseased or defective, and of low value. Sales of timber from these locations generally require more expensive road construction and logging systems. There have been no bids on recent timber sales in these areas, reflecting the lack of demand for this type of material under current market conditions.

The demand for fuelwood has increased greatly over the past few years, and continues to rise. This demand has resulted in a corresponding decrease in readily accessible supplies. As a result, commercial firewood vendors are obtaining higher prices, and in some cases the value of certain commercial timber species is higher when utilized as firewood than as saw logs. Also, some purchasers of BLM timber sales are conducting concurrent firewood operations, which has reduced the amount of logging debris available for public consumption and increased the demand by the public for firewood from snags and other dead material.

Table 14 Cubic Foot Site Class in Acres for Suitable Commercial Forestland

Cubic Foot Site Class	Mean Annual Increment Cubic Feet Per Acre	Acres
1	225 +	0
2	165-224	1,173
3	120-164	1,760
4	85-119	2,640
5	50-84	7,919
6	20-49	15,838
Total		29,330

Woodlands

The Baker Resource Area manages an estimated 59,000 acres that are classified as "woodlands". Woodlands are forest lands of low productivity that are not included in the commercial forest allowable harvest base. Typical resource area woodlands include forest stands composed of at least 10 percent western juniper and other noncommercial tree species.

About 41,000 acres of woodlands are suitable for a sustained harvest of forest products, while about 18,000 acres are biologically and environmentally unsuited for harvest. Relatively light demand currently exists for wood products from the woodlands

that are suitable for harvest. Sales of products such as juniper posts and boughs are issued on a demand basis.

Fire

An average of 28 fires have burned 1,260 acres annually since 1970 on lands protected by the Baker Resource Area (see Table 15). About 60 percent of the fires are man caused and about 40 percent are caused by lightening. Most fires occur from mid-June through mid-August.

Historically, fires have played a larger role in the rangeland and forest ecosystems of the planning area. Fires have a significant and direct impact on plant succession, habitat diversity and nutrient cycling, and are related to the occurrence of plant disease and insect infestations. However, since about the beginning of the century fires have been suppressed as quickly and completely as possible, and have been effectively excluded from their natural role in the ecosystems of the planning area.

The exclusion of fire has resulted in an increase in the amount of sagebrush and has generally reduced rangeland habitat diversity in the planning area. In forest stands, fire exclusion has caused a general shift to climax ecosite stage; true firs are generally increasing while ponderosa pine and western larch are decreasing. As the stands move toward climax conditions more ground and ladder fuels exist, increasing the risk and potential intensity of future fires.

Wildlife

Wide variations in climate, topographic features and vegetative types in the planning area provide habitat for a great diversity of fish and wildlife (see Table 16). There are 438 fish and wildlife species in the planning area. These include 45 fish species, 26 amphibians and reptiles, 277 birds and 90 mammals. Most of the species are classified as nongame or are not hunted, and include raptors, songbirds, reptiles, amphibians and small mammals. Eight big game species occur in the area and are found in a variety of suitable habitats.

Wildlife Habitat Inventory, Planning and Development

Recent inventories have been conducted on a large portion of riparian habitats, fisheries habitats, crucial big game seasonal ranges and raptor habitats. Mule deer winter food habit studies have been conducted on a limited basis. Vegetation mapping using Standard Habitat Sites has been conducted on about a third of the public lands in Baker County, and is continuing.

Three Habitat Management Plans (HMPs) are being prepared for priority management areas.

1) The Wildlife Protective Area HMP

Forty-nine wildlife protective areas in Baker County ranging in size from 1-400 acres have been fenced to exclude livestock from sensitive areas. Most of these exclosures are on riparian zones. Numerous shrub plantings have been conducted to stabilize streambanks and provide habitat, and several experimental exclosures have been established to evaluate wildlife forage requirements.

2) The Burnt River HMP is being designed to enhance riparian and stream habitats for a cold water fisheries.

3) The Lookout Mountain HMP is being designed primarily to improve summer range for mule deer.

Prescribed burning has been used on about 1000 acres to set back plant succession, improve forage quality and quantity, and to prepare sites for big game habitat plantings.

Fifty guzzlers have been installed in areas lacking perennial water to provide water for birds.

Mule Deer

Sixteen wildlife management units identified by the Oregon Department of Fish and Wildlife (ODFW) cover the planning area. These units contain about 50 percent of the mule deer in eastern Oregon. From 1967-69 Oregon boasted the largest mule deer herds in the country, averaging about 550,000

Table 15 Baker Resource Area Wildfire Statistics 1970 - 1983

	Number of Fires	Lightning Caused	Man Caused	Acreage Burned	Lightning Caused	Man Caused
Total	392	117	275	17,643	9,351	8,292
Average Per Year	28	8	20	1,260	668	592

Table 16 Population and Habitat Summary For Selected Wildlife

Species	Occurrence	5 Year Population Trend *	Habitat Type	Habitat Condition	Habitat Trend	Habitat Potential
Mule Deer	Abundant	-	sagebrush grass; mixed conifer forest	Poor-Fair	Stable	High
Rocky Mountain Elk	Abundant	+	mixed conifer forests, grassland openings	Fair-Good	Stable	Med-High
Pronghorn Antelope	Occasional	+	sagebrush-grass	Fair	Stable	Med-High
Mountain Lion	Common	+	rugged, rocky, inaccessible habitats	Good	Stable	Low
Mountain Goat	Rare		subalpine, alpine habitats			
Bobcat	Common	+	rugged areas in sagebrush-grass habitats	Fair-Good	Stable	Medium
Coyote	Abundant	+	sagebrush-grass	Good	Stable	Medium
Beaver	Common	-	marshes, streams, ponds near woodlands	Poor	Decreasing	High
Blue Grouse	Abundant	-	edges & openings in conifer forests	Poor	Stable	High
Ruffed Grouse	Common	-	riparian zones, decidous woodlands	Poor	Stable	High
Sage Grouse	Occasional	0	sagebrush-grass	Fair	Stable	Medium
Calif. Quail	Common	-	brush with open areas	Poor	Stable	High
Chukar	Abundant	-	rugged, steep, arid grasslands	Excellent	Stable	Low
Ring-Neck Pheasant	Abundant	-	agricultural areas	Poor	Stable	High
Ducks	Common	0	ponds, streams, marshes	Poor	Stable	Low
Geese	Common	+	ponds, large reservoirs	Fair	Stable	Medium
Raptors		+	canyon rims and ledges	Good	Stable	Low
Woodpeckers		0	Snags, old growth forests	Fair	Stable	Low
Bats			caves, mine shafts, snags	Fair	Stable	Low
Trout		0	Colder waters, streams and large reservoir	Poor	Stable	Medium
Anadromous		0	cold, free-flowing water	Poor	Stable	Medium
Warm Water		0	Large Reservoirs	-	Increasing	Medium

* + = Increasing
0 = Stable
- = Decreasing

total population. In 1984 the population was estimated at about 257,000, a reduction in the herds of 55 percent. Mule deer harvest has also declined from a high of 98,000 in 1961 to 32,600 in 1983. This decline is also reflected in the wildlife management units covering the planning area.

Numerous factors have contributed to the declining mule deer population, including habitat deterioration and loss, severe winters, poaching and predation. The 1983-84 winter was extremely harsh on mule deer, and fawn losses up to 85 percent were reported in the planning area. Currently deer populations in Baker County are about 40 percent of the 1978 levels.

Big Lookout Mountain and Pedro Mountain in Baker County are the primary summer habitats for mule deer on BLM administered land in the planning area. BLM lands in the northern portion of the planning area that support summer deer populations are small in acreage and widely scattered.

Summer habitat condition for deer is rated poor to fair. Much of the forested areas of the summer range, such as Big Lookout Mountain, is in an advanced stage of plant succession with dense forest canopy, even-aged stands and little species diversity. Approximately 1,300 acres (out of 1900 acres) of BLM commercial forest and on Big Lookout Mountain. is in old growth (160 years ±). Aspen stands are decadent with few resprouts, are overgrazed and are being invaded by conifers.

Winter ranges for mule deer in Baker County are primarily found below 3500 feet in elevation and consist of sagebrush-grass, juniper-sagebrush and/or sagebrush-mixed shrub vegetation types. There are approximately 150,000 acres of deer winter ranges on BLM land in Baker County. On Section 15 lands there are about 15,000 acres of

deer winter range, which are found mostly along the Grande Ronde River and its tributaries.

Most deer winter ranges are in poor condition due to the lack of shrub diversity and cover. Also, large areas of deer winter range have progressed to climax grassland types or have been converted to crested wheatgrass seedings that provide minimal forage and cover to maintain wintering deer.

Rocky Mountain Elk

Over the last 20 years elk have increased and expanded their range into habitats formerly occupied only by deer, such as in the Big Lookout Mountain area. This is probably the result of several interacting factors. Elk are better adapted than deer to withstand harsh winters due to their larger size and foraging behavior. Also, land use practices that convert brushlands to grasslands favor elk, and the ODFW has generally emphasized elk management over deer management in the majority of units where both species occur.

About 70 percent of the Rocky Mountain elk population in Oregon is found within the boundaries of the planning unit. On BLM lands in Baker County, small elk herds occupy summer range on Big Lookout, Hunt and Pedro Mountains. Elk winter range on BLM lands in Baker County is found along the Snake River breaks, Elkhorn front, Burnt River, and the Keating and Richland Valleys.

North of Baker County, elk summer on BLM lands on Tamarack Mountain, Shaw Mountain, Mill Creek, Mount Harris, and the Wenaha and Chief Joseph Wildlife Management Units. Wintering areas on BLM lands north of Baker County are found along the South Fork of the Walla Walla River, Grande Ronde River, Cable Creek, the Wenaha, Chief Joseph and Bridge Creek Wildlife Management Units, and other scattered BLM tracts along forest fringes.

Both summer and winter elk habitat quality on BLM lands is considered in fair condition, but limited in quantity. In cooperation with ODFW, three elk feeding sites have been established on BLM lands in Baker County to help alleviate forage depredation on private lands.

Other Big Game

Fourteen mountain goats were recently transplanted to the Elkhorn range. Additional goat transplants may occur in the future. A small population of bighorn sheep are found on the Chief Joseph Wildlife Area in southeastern Washington. Suitable habitat exists in the McGraw Creek and Burnt River area for reintroducing mountain sheep into ancestral habitats.

Mountain lions are distributed throughout the area, but are found mostly in rugged, inaccessible country, such as along the Snake River breaks. Populations have been increasing over the last several years.

Black bear populations are also increasing and occur in the Big Lookout Mountain area, and along the Snake River and Grande Ronde River breaks.

Upland Game Birds and Waterfowl

The area has a rich assortment of upland game birds, but most populations are scattered and small because of poor quality habitat. However, excellent habitat exists for chukar. Waterfowl habitat is limited on BLM lands. Canada geese, mallards and cinammon teal are the most common residents and summer breeders. A wide variety of waterfowl can be seen on some of the larger reservoirs during spring and fall migrations including green and blue winged teal, gadwalls, widgeon, ruddy duck, greater scaups and shovelers.

Raptors

Twenty-four species of raptors have been recorded and range from uncommon to common in abundance. Over 160 nests have been found in the area. Hawks inhabit coniferous woodlands. Buteos, eagles and falcons prefer habitat of precipitous cliffs surrounded by open hunting areas of sagebrush, grasslands or sparse stands of western juniper. Owls are widespread, living in a variety of habitats. Harriers frequent open grasslands, usually in proximity to marsh or wetland habitats. Bald eagles in winter and ospreys during summer are found along the larger rivers and reservoirs.

Nongame - Birds, Mammals, Reptiles and Amphibians

An abundance and variety of nongame species utilize the various habitats of the planning unit. Many are important prey species, and some may be used as indicators of environmental quality, such as the pileated woodpecker as an indicator for old growth forests. Field observations and literature reviews for nongame species are summarized in resource area files.

Fish

Forty-five fish species are found in the planning unit and 27 are considered game fish. Warm water species such as small mouth bass, bullhead and crappie are found in ponds and reservoirs. Cold water species such as brook trout and Dolly Varden are found in streams and rivers. Rainbow trout may be found in streams as well as larger reservoirs. Anadromous fish such as steelhead and salmon are found in the larger river systems and tributaries, such as the Grande Ronde, South Fork of the Walla Walla, and the North Fork of the John Day.

Rock dams have been built to improve fisheries habitat on several streams, particularly in the Burnt River drainage system.

Threatened, Endangered or Sensitive Animal Species

Table 11 describes threatened, endangered or sensitive species in the planning area.

The northern bald eagle is federally listed as threatened in Oregon and Washington. In the planning area bald eagles are primarily winter residents along major rivers such as the Snake, Columbia and Grande Ronde. Inventories of bald eagle habitat have been conducted along Brownlee and Hells Canyon Reservoirs, and eagle populations in the planning area are counted each winter and spring. The first successful nesting of bald eagle in northeast Oregon in 25 years was discovered in 1984 near Unity reservoir. The BLM, Forest Service and ODFW have entered into a cooperative agreement for protecting this nest site and adjacent habitat near Unity Reservoir.

Species occurring in the planning area that are Federal candidate species are the ferruginous hawk, Swainson's hawk, western sage grouse, long-billed curlew and spotted bat (Federal Register 1985). Eleven nesting platforms have been constructed for ferruginous hawk and are monitored regularly. The Columbian sharp-tailed grouse was recently extirpated in Oregon and is considered a sensitive species.

Species of concern to the Oregon Department of Fish and Wildlife, but that have no state legal status, are the greater sandhill crane, sharp-tailed grouse, great gray owl, western bluebird, yellow warbler and loggerhead shrike (Oregon Nongame Wildlife Management Plan 1984).

Topography, Geology and Energy/Mineral Resources

Topography

Northeastern Oregon contains a wide range of landforms and elevations. The area contains the high peaks of the Wallowa Mountains, broad intermountain basins, and Hells Canyon, which is the deepest gorge in North America. Elevations range from 9,845 feet at the top of Matterhorn Peak in the Wallowa Mountains, to about 250 feet where the Columbia River crosses the western boundary of Morrow County.

The planning area can be divided into four topographic areas (refer to Fig. 2): the Umatilla Plateau, Joseph Upland, Blue Mountains and Snake River Canyon.

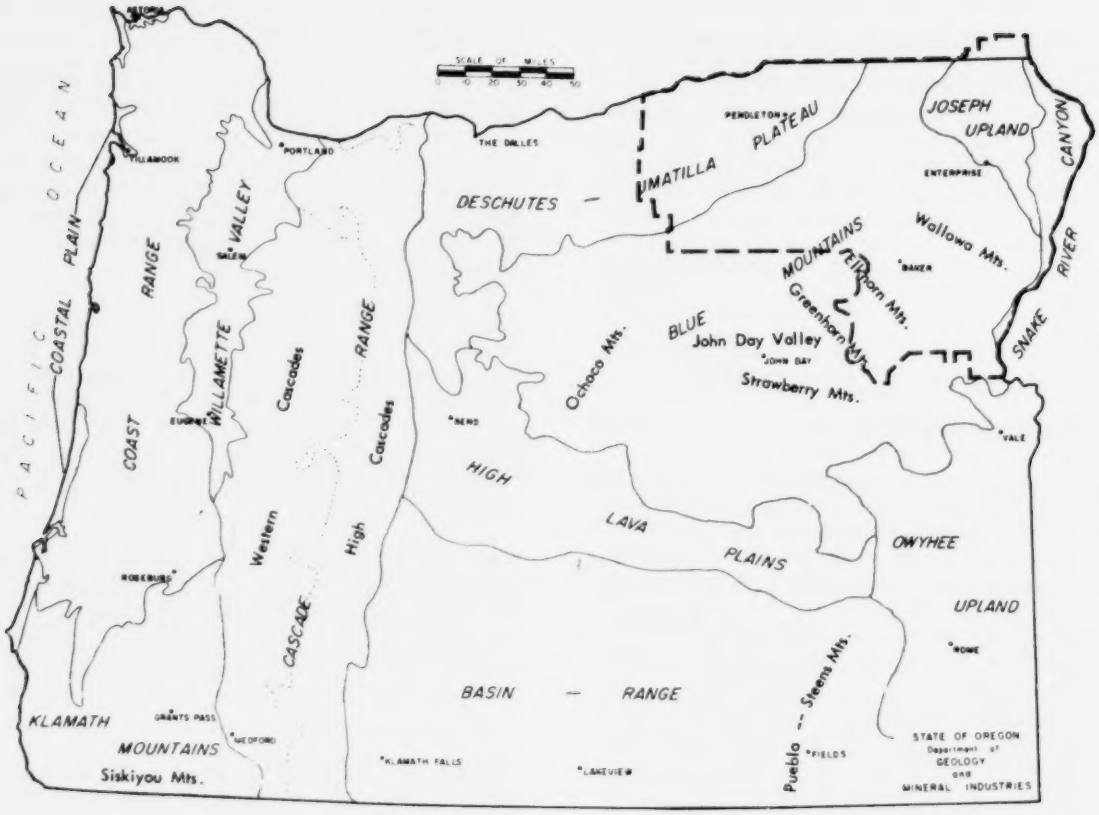
The Umatilla Plateau is a narrow, moderately eroded plateau underlain by basalt. The plateau slopes toward the Columbia River and is drained by Willow Creek and the Umatilla and Walla Walla Rivers. BLM administered lands on the plateau are small and widely scattered.

The Joseph Upland is a rolling upland, underlain by basalt, that has been deeply eroded and dissected by its major streams. The Snake, Grande Ronde and Imnaha rivers, and Joseph Creek have cut deep canyons through the upland that vary from 2,000 to 4,000 feet deep. Most of the BLM administered lands in this area are located in the rugged topography along the Grande Ronde River and its tributaries.

The Blue Mountains are a complex of mountain ranges, steep sided canyons, dissected uplands and broad intermountain valleys. The Blue, Wallowa and Elkhorn mountains represent the major mountain ranges. A series of broad valleys have formed between the mountain range, and most of the land in these valleys is privately owned.

Most of the BLM administered lands in the planning area are located in the Baker County portion of the Blue Mountain area. The BLM tracts generally lie between 3,000 and 6,000 feet in elevation and are primarily located in the dissected uplands and canyons.

The Snake River has eroded an extremely rugged and deep canyon as it flows north to join the Columbia River. The Snake River is no longer free-flowing through Baker County. Dams have formed the Oxbow, Brownlee and Hells Canyon reservoirs. Numerous large tracts of BLM administered land are located within the breaks of the Snake River in Baker County.



Geology

Appendix C summarizes the geology and mineralization that occurs within the planning area. More detailed descriptions of the geology, geologic history, structure and mineralization are available in Thornbury (1965), Brooks and Ramp (1968), USDI (1969), Baldwin (1976), Vallier (1977), Brooks (1979), Fredericksen and Fernette (1983), Stoffel (1984), Ferns and Huber (1984) and Ferns (1985).

The rocks exposed at the surface of the planning area have been divided into two groups based on their age. The older group, pre-Tertiary in age, occurs at the surface of planning area primarily in Baker County and along the Snake River. Most of the surface of the planning area is covered by the younger, Cenozoic age group. A long period of erosion has separated the two groups in the geologic record.

The pre-Tertiary group consists of a wide variety of volcanic and sedimentary rocks that were deposited mostly under marine conditions. Two major sequences of igneous rocks have intruded the pre-Tertiary age rocks. Most of the metallic mineral deposits found in the planning area associated with submarine volcanism or the intrusive igneous rocks.

The Cenozoic age rocks consist of a wide variety of nonmarine lavas, ash flows, and loosely consolidated fresh-water sediments. Some sediments were deposited between some of the lava flows and contain localized deposits of carbonaceous mudstone, peat, lignite and coal, which are usually small except in the case of the Troy Basin. Extensive deposits of lignite occur in the sedimentary interbeds of the Troy Basin, which is a structural depression along the southeastern flank of the Blue Mountains uplift (refer to Map 4).

Energy/Mineral Resources

The Baker Resource Area administers an estimated 939,000 acres of federal mineral estate. About 513,000 of these acres are split estate, where the federal government owns the subsurface mineral rights but the surface is private land.

Significant deposits of commercial grade limestone, gold, silver, copper and antimony have been

discovered on BLM administered mineral estate within the planning area. Other known mineral occurrences include tungsten, mercury, chromite, manganese, uranium, iron, zinc, lead, asbestos, perlite, zeolites, bentonite, diatomite, gypsum, semiprecious gem stones, coal and lignite, geothermal hot and warm springs, clay used in the manufacture of cement, rock suitable for road aggregate and riprap, cinders, facing stone, sand and gravel, and moss rock. Also occurring are rocks and minerals such as opal, jasper, agate, petrified wood and obsidian that are of interest to recreational rock and mineral collectors.

Other mineral resources such as oil and gas have potential for discovery and development.

Leasable Minerals

About 105,000 acres are leased for oil and gas but no commercial discoveries have been made in the planning area. The potential for oil and gas discoveries is moderate to low for the northern part of the planning area. Lands prospectively valuable for oil and gas are shown on Map 8. In particular, potential natural gas occurrences may be associated with carbonaceous mudstone, lignite and coal deposits found in the sedimentary interbeds between basalt flows. The older sedimentary rocks located below the lava flows also have some potential. The oil and gas potential for the Baker County portion of the planning area is very low.

Prospectively valuable geothermal resources (Map 8) have low potential for development of electrical generating plants. However moderate potential exits for the development of commercial or residential space heating applications. No geothermal leases have been issued.

Potential for development of coal resources within the planning area is confined to the Troy Basin, as shown on Map 4. Within the Troy Basin lignite field the Baker Resource Area administers 25 tracts, totaling about 1520 acres of federal mineral estate, with moderate to low potential for the occurrence of low grade lignite deposits within 150 feet of the surface. About 724 acres of the 1520 acres is split estate. No prospecting permit or lease applications have been received for these tracts and there is no known interest in them.

Locatable Minerals

Currently about 3500 mining claims have been located on federal mineral estate administered by the Baker Resource Area. Baker County has produced more gold and silver than any other county in Oregon. Between 1902 and 1965 mines in Baker County produced 1,258,979 Troy ounces of gold and 2,265,713 Troy ounces silver. This production represents about 58% of the total production for Oregon during that time.

A number of gold and silver mines and old mining districts occur on or near public land in the planning area (Map 4). Both placer and lode gold and silver deposits have been mined in the past. Most of the present production comes from placer operations. Due to high mining costs and low metal prices most of the lode gold properties are not in production.

Placer gold and silver deposits are usually located in valley bottoms along streams and rivers, but also may be located on "high bars", usually stream terraces or abandoned stream courses. Mining operations vary from gold panning and other hand work to the use of large, mechanized equipment. Many placer operations are reworking previously mined areas.

Nearly all lode gold and silver mines have been underground operations. Two recent operations in the Virtue district have attempted to surface mine low grade gold and silver deposits and extract the precious metals using sodium cyanide leaching methods. Neither appears to have been successful as of yet.

The greatest potential for future metal mining in the planning area, should there be substantial increases in the price of gold, silver and base metals, will be in the gold and silver vein deposits, massive to disseminated volcanogenic deposits, and hydrothermal gold and mercury occurrences. There has been renewed interest by mining companies in the planning area because volcanogenic deposits and hydrothermal deposits have been identified.

Ash Grove Cement West, Inc. is the largest producer of mineral products within the planning area. They mine commercial grade limestone from their quarry located near Durkee in Baker County. Some of their production comes from public land.

Salable Minerals

The planning area has abundant mineral material sources to meet the local demand for aggregate or building stone.

Road Access and Utility Corridors

Road Access

The BLM road system in the planning area totals 398 miles, and is augmented by an extensive system of roads managed by Baker County and the

FS. Almost all the BLM roads and a large portion of the Baker County and FS roads are either dirt or graveled. Many are closed by snow in winter, and require four wheel drive vehicles during wet periods.

Road access to the Baker county portion of the planning area is generally adequate, although poor or no road access exists to some areas. Road access is much more limited to the scattered BLM parcels in the northern counties of the planning unit, due to more difficult topography and greater legal access restrictions.

Utility and Transportation Corridors

Utility and transportation corridors through the planning area have been established by existing use, and generally follow major highways, electric transmission lines, natural gas pipelines and railroads (refer to Map 6). The primary multipurpose corridor is Interstate Highway 84, which diagonally bisects the planning area. The mainline of the Union Pacific Railroad and a double natural gas pipeline follow this corridor.

The existing corridors across BLM lands are the same as those anticipated by the Western Regional Corridor Study of 1980, which identified corridor needs through the year 2020. A proposed corridor north of and roughly parallel to the Grande Ronde River would not cross significant amounts of BLM land and was not considered a relevant issue.

Recreation

The boundaries of the planning area contain an abundance of outdoor recreation opportunities. Major attractions include Brownlee Reservoir, Oxbow Reservoir, Hells Canyon Reservoir, Columbia River, Snake River, John Day River, Grande Ronde River, Hells Canyon National Recreation Area, the Eagle Cap and other wilderness areas, and two national forests. Major recreation features in the region are primarily located on lands managed by other agencies, particularly the FS. However, nearly 50 percent of the lands fronting the reservoirs on the Snake River and about 20 percent of the Grande Ronde River frontage is BLM land.

BLM lands play an integral part in the regional recreation setting. They are heavily used for hunting, camping, fishing, float boating and off road vehicle use (refer to Table 17). In many instances BLM lands provide access and overflow areas for the more intensively used recreation lands in the national forests. BLM lands also provide varied landforms and generally unrestricted settings for many activities, including rockhounding, trapping, horseback riding and sightseeing.

Table 17 Top Five Recreational Uses Within the Planning Area

Activity (Public Land)	(1984 Estimated) Visitor Days
Hunting (big game, small game, upland game, waterfowl)	62,000
Developed Recreation Site Use	60,000
Fishing	56,000
Float Boating (river use)	28,000
Off-Road Vehicle Use	10,000
Total	206,000

BLM administered lands in the northern portion of the resource area, outside of Baker County, consist mostly of small, scattered parcels that primarily provide recreation opportunities for local communities. An exception is the Grande Ronde River, which is a primary destination for river rafting and flows through a substantial amount of BLM land.

Recreation use of the Grande Ronde River has stabilized at about 24,000 visitor days annually. Visitation is expected to increase in the future as more people discover this lightly used river resource. However, even at current use levels the general condition of public lands used by floatboaters along the river are deteriorating. Vandalism of cultural sites, degraded campsites, sanitation and poor river access are immediate management concerns.

The Baker County portion of the planning area contains larger blocks of BLM land, all of the developed BLM recreation sites, and offers diverse recreation opportunities for local and regional residents.

The Oregon National Historic Trail crosses nine separate parcels of BLM administered lands in Baker, Union and Umatilla Counties. An interpretive site has been developed at the Flagstaff Hill trail segment, located 7 miles east of Baker on Highway 86. This site receives moderate use and is in need of minor maintenance.

Spring Recreation Site on the Brownlee Reservoir and Bassar Diggins campsite are developed BLM recreation sites in Baker County. Spring Recreation Site is well developed, but it's facilities are generally inadequate to meet the heavy user demand. Bassar Diggins contains minimal facilities, receives light use and is maintained at an adequate level.

The Burnt River, Powder River, undeveloped John Day River, Brownlee Reservoir and Hells Canyon Reservoir are undeveloped, water-based use areas receiving moderate to heavy use. In some instances, such as Brownlee Reservoir, user demand for camping and boating access is not being met.

Sheep Mountain, Oxbow Mountain, Lookout Mountain, Hunt Mountain and the Snake River Breaks are managed for their primitive characteristics and receive light to moderate use.

Virtue Flat in Baker County has been designated as open for off road vehicle use, and is frequently used for competitive ORV events.

Cultural Resources

Cultural resources in the planning area consist of prehistoric sites, historic sites and past Native American cultural use areas. Regionally, more than 5000 historic and prehistoric sites have been recorded on federal land, and 304 of these sites occur on BLM land in the planning area.

Six percent of the BLM land in the planning area has been inventoried. Nearly all of the inventories have been conducted as part of site-specific environmental assessments of resource projects, such as timber sales and range developments. Large areas remain uninventoried. Uninventoried areas include those that have high potential for the occurrence of cultural sites, such as the Grande Ronde and Snake River drainages, Joseph Creek, the Imnaha River and the South Fork of the Walla Walla.

A total of 242 prehistoric sites have been identified on BLM land in the planning area. Prehistoric sites span the period from 10,000 to 180 years ago, and consist of material remains left by mobile bands of Native American foragers and collectors. The period from 10,000 to 4,500 years ago is the least known archaeologically. Over the past 4,000 years prehistoric inhabitants became more sedentary and intensified their use of plant root crops. Prehistoric sites in the planning area include housepit villages, central base campsites, burials, trails, rockshelters, tool manufacturing and maintenance stations, resource exploitation sites, raw material procurement areas, vision quest or other probable sacred sites, and rock art.

Several prehistoric sites in the region are listed on the National Register of Historic Places, and prehistoric habitation sites along the Snake River (from Asotin to Hells Canyon Dam) are included in two National Register Archaeological Districts. In one of these, the Snake River Archaeological District, ten prehistoric sites are recorded on BLM land. Because archaeological investigations have focused mainly on riverine sites, the prehistoric record of upland settlement in the planning area remains largely unstudied. Native American cultural sites dating from 1700 to 1840, and historic sites from the early decades of Euro-American fur trade and exploration (1800-1830) are also largely undocumented.

Sixty-two historic sites that date generally from the 1860's to 1930's have been identified on BLM land in the planning area. These sites include early townsites or remains which include Chinese occupations (1860-1870), placer and lode gold mining sites (1860-1930), ranching and homesteading structural remains (1862-1930), logging and railroading remains (1870-1950), government development projects (1895-1940), and energy development (1890-1950). None of the eligible BLM historic sites have been nominated to the National Register of Historic Places, although many other historic sites in the region are listed on the National Register.

Several segments of the Oregon National Historic Trail (1843-1860) occur in the planning area and have received special congressional designation. Visible wagon ruts are recorded on seven BLM locations in the planning area, and are found on several other sites of federal and private land (Oregon National Historic Trail, National Park Service 1981, Primary Route). Refer to Map 6 for the location of the Oregon Trail.

The demand for cultural resource inventory, protection and interpretation seems to be increasing. University research has occurred at several cultural sites on adjacent state and federal lands. National and local organizations have formed to promote protection of the Oregon Trail, and the Trail serves as a major attraction in regional tourist promotions.

Paleontological Resources

Eleven sites with plant and animal fossils have been discovered on BLM lands in the planning area, but no systematic inventory or evaluation of paleontological resources has been conducted. Most of these fossil sites are Miocene-Pleistocene deposits in the Unity-Upper Burnt River area, and many localities consist of transported rather than in place material. Appendix D provides fossil-type descriptions by geologic formation, time period of deposit and general location. Natural erosion continues to affect exposed sites, and is being accelerated by unauthorized off road vehicle use in the Unity area.

No sites are known to occur on BLM land in the northern counties in the planning area, although BLM lands are near known fossil locations in Morrow and Umatilla Counties.

On a regionwide scale, several formations yield abundant plant and animal fossils. Pre-Cenozoic marine invertebrates, such as clams and nautiloids, are found in limestone and shale formations in the Blue and Wallowa mountains. Important Cenozoic subtropical plants are contained in Clarno beds and

un-named Paleocene deposits in the eastern Blue Mountains and margin of the Deschutes-Umatilla Plateau. Late Tertiary to Quaternary sedimentary deposits have yielded important vertebrate mammal remains. Marsh environment floral specimens of Miocene-Pliocene age are found in the Burnt and Powder River basins. Miocene forest remains are found in a few localities in Hells Canyon.

A 200 million year old marine reptile, Icthyosaurus, was recently discovered on lands managed by the FS in the south Wallowa Mountains. This specimen is currently the oldest recorded vertebrate fossil in Oregon.

Visual Resources

The planning area has a diverse landscape. Vistas within the planning area are of broad valley bottoms, narrow river valleys and riparian zones, rolling sagebrush hills, timbered uplands and rocky mountain ranges.

Highly scenic areas include the Grande Ronde, Joseph Creek and John Day River corridors, and the Sheep Mountain, Homestead, McGraw Creek and Cache Creek Wilderness Study Areas.

Visual resources in the planning area have been classified according to BLM's visual resource management criteria (see Map 5 and Table 18). These criteria establish management objectives and the degree of visual change that would be acceptable within a landscape.

Special Management Areas

Unique resource values that deserve special management attention may be designated as Special Management Areas (SMAs). These designations include Areas of Critical Environmental Concern (ACECs), Research Natural Areas (RNAs), Outstanding Natural Areas (ONAs) and other special designations.

As part of the process of developing this RMP, nominations for Special Management Areas were requested from the public and BLM resource specialists. Twenty-two SMAs were nominated, and are being considered for designation or further study. Refer to Table 26 for a description of possible SMAs, and Map 5 for SMA locations.

Economic Relationships

Estimates of local personal income and employment attributed to the resources in the planning area were developed by using the FS IMPLAN System (see Appendix E). Five Oregon counties that are completely contained within the planning area are considered the zone of economic influence and will be used for analysis purposes. These counties are: Baker, Morrow, Umatilla, Union and Wallowa. Small portions of Malheur County, Oregon, and Asotin and Garfield Counties in Washington State are also within the planning area, but are not analyzed because economic data is available only on a county-wide basis.

Population, Income and Employment

The population in the five counties was 115,055 persons in 1983. This was 4 percent of the population in the state, as shown in Table 19. The major trade centers within the planning area include the cities of Baker, La Grande, Pendleton, Hermiston and Milton-Freewater.

Major industries within the planning area include agriculture, timber and wood products, and recreation. Employment by source and personal income for 1982 are presented in Table 20.

Estimates of personal income and employment generated from activities on public land in the planning area are displayed in Table 21. In 1982 activities on public land contributed less that 1 percent of local personal income and employment in the region.

Table 18 Visual Resource Management Classes Inventory

Class	Acreage	Percent of Planning Area
I	53,176	12
II	187,655	44
III	128,962	30
IV	58,379	14
Total	29,754	100

Table 19 Population by County

	1960	1970	1980	1983
Baker	17,295	14,919	16,134	16,150
Morrow	4,871	4,465	7,519	7,275
Umatilla	44,352	44,923	58,861	60,100
Union	18,180	19,377	23,921	24,200
Wallowa	7,102	6,247	7,273	7,330
Region	91,800	89,931	113,708	115,055

Table 20 Employment and Personal Income, 1982

	Baker	Morrow	Umatilla	Union	Wallowa	Five County Region
Employment						
Proprietor						
Farm	859	506	1,897	996	656	4,914
Non-Farm	1,030	480	2,597	1,214	447	5,768
Wage and Salary						
Farm	350	1,018	2,350	373	245	4,336
Non-Farm						
Agricultural Service	41	52	D	117	22	232
Mining	D	0	D	L	L	0
Construction	D	105	382	190	35	712
Manufacturing	411	843	3,950	1,384	292	6,880
Transportation and Public Utilities	202	252	1,260	664	96	2,474
Wholesale Trade	150	68	1,170	316	80	1,784
Retail Trade	869	276	3,320	1,344	356	6,165
Finance, Insurance and Real Estate	205	62	690	221	68	1,246
Services	823	185	3,231	1,527	237	6,003
Government						
Federal, Civilian	375	66	907	232	157	1,737
Federal, Military	51	55	190	79	23	398
State and Local	815	519	3,649	1,701	521	7,205
Total[1]	6,390	4,487	25,849	10,370	3,238	50,334
Total Personal Income ($MM)	142.42	86.39	540.31	213.01	68.30	1,050.43
Per Capita Income ($)	8,675	11,459	8,948	8,656	9,135	9,375

[1]Consists of Wage and Salary Jobs (full and part-time) plus number of proprietors
D Not shown to avoid disclosure of confidential information
L Less than 10 jobs

Source: Regional Economic Information System, Bureau of Economic Analysis 1984

Table 21 Personal Income and Employment by Resource Output, 1982 Dollars[1]

Activity	Personal Income ($)	Employment[2]
Livestock Grazing	60,000	2
Timber Production	600,000	9
Recreation	825,000	31
Total	1,485,000	42

[1]Coefficients for calculating income and employment impacts obtained from U.S. Forest Service Interindustry Model, USDA, 1982. (Appendix E)
[2]Employment shown is not full-time-equivalent

Minerals

Leasable minerals include oil, gas and geothermal resources. There are about 105,000 acres leased for oil and gas in the planning area. These lands are currently leased at $1.00 per acre per year for the first 5 years, thereafter they are leased at $3.00 per acre per year. Fifty percent of oil and gas lease fees go the state and local government. There are no geothermal leases. Minerals actively mined from unpatented mining claims on public lands in the planning area are limestone, gold and silver. Salable minerals include sand, gravel and building stone.

Timber

The current sustainable harvest level is 28 MMBF per decade. The harvest of BLM timber amounts to less than 1 percent of the total annual harvest for the five county area. Timber harvest for the five counties from all sources averaged 400 MMBF between 1979 and 1983. Timber harvest for the State of Oregon averaged 6,871 MMBF for this period (ODF).

Timber harvest from BLM lands in the planning area over the last 5 years averaged 3.0 MMBF,

which generated approximately $600,000 in local personal income (less than 1 percent of total personal income for the region) and nine jobs (less than 1 percent of total employment for the region).

Dependence of Livestock Lessees on Public Forage

There are 4,258 AUMs of authorized use on Section 15 grazing lands in the planning area. The sale of these AUMs annually generates approximately $60,000 in personal income (less than 1 percent of total local personal income) and 2 jobs (less than 1 percent of total employment). In 1984, total receipts to BLM from livestock grazing leases amounted to approximately $6,000. Fifty percent of the grazing lease fees collected annually are distributed to the county in which they originated.

The dependence of ranch operations on BLM forage is determined by the total amount of required forage available from public lands; seasons when forage is available; and the availability of forage substitutes.

The average annual dependence of these operators, according to herd size categories is shown in Table 22. This dependence is calculated by dividing active use for a herd size class (12 times the number of cattle involved) and converting to a percentage. The average ranch is about 1 percent dependent on BLM forage.

There may be a capitalized value associated with grazing permits and leases that is only realized upon the sale of the ranch. The BLM does not recognize the right of the lessee to treat grazing leases as real property. However, effects on private asset valuation may occur. The Oregon State Office appraisal staff estimated that the value for BLM grazing leases is approximately $60-$65 per AUM.

Recreation

Hunting, fishing, floatboating and general recreation use on BLM lands in the planning area generated an estimated $825,000 in local personal income and 31 jobs in 1982 (see Table 23). The income and employment generated from recreation use was responsible for less than 1 percent of total 1982 personal income and employment in the region.

1983 study by the U.S. Travel Data Center for the Tourism Division of the Oregon Economic Development Department estimated the economic impact of travel on Oregon counties see Table 24. Travel generated payroll for the five county area amounted to a total of 13.5 million, which was 2.7 percent of the total payroll in 1983.

Table 22 Lessee Dependence on BLM Forage by Herd Size for Section 15 Lands

Herd Size Class	Number of Lessees in Class	Lessees by Level of Dependence 0-15%	16-30%	31-80%	Average Dependence
0-399	88	83	5	-	2%
400-999	16	16	-	-	1%
>1000	7	7	-	-	0%
Total	111	106	5	-	1%

Table 23 Personal Income and Employment Related to Recreation Activity, Planning Area 1982

Activity	Personal Income	Employment (Jobs)
Hunting		
Big Game	184,000	5
Small Game	2,000	*
Upland Game	34,000	1
Waterfowl	7,000	*
Fishing	84,000	1
Developed Rec	170,000	7
Floatboat	250,000	13
ORV	10,000	*
Other Rec	84,000	4
Total	825,000	31

*Less than 1

Table 24 Impact of Travel on Five Oregon Counties, 1983

County	Travel Generated Payroll (000)	Total Payroll (000)	Travel Industry / of Total Payroll	Travel Generated Employment (Jobs)
Baker	2,405	54,581	4.4	351
Morrow	447	49,616	0.9	65
Umatilla	7,870	261,402	3.0	1,134
Union	2,103	113,857	1.9	301
Wallowa	705	26,650	2.7	101
Region	13,530	506,106	2.7	1,952
State	431,985	15,767,000	2.7	53,145

Source: Oregon Economic Development Department, 1985

Chapter 3
Description of Alternatives

Land Use Alternatives

Four resource management alternatives have been developed for the planning area. Each alternative proposes different solutions to the land management issues identified by the public and BLM at an early stage in the planning process. Each alternative also presents a complete and reasonable plan to guide future management of public land and resources.

The No Action Alternative continues current management practices. The Commodity Production Alternative emphasizes the development of commodity resources, and the Natural Environment Protection Alternative emphasizes enhancement of natural values and ecosystems. The Preferred Alternative is a combination of the other management alternatives and, based on the analysis of consequences (Chapter 4), represents the most acceptable resolution of planning issues and concerns.

Maps 9, 10, and 11 visually display alternative resource management priorities, and should be used in conjunction with the alternative narratives in this chapter.

Assigning management priority areas for a particular resource does not necessarily exclude other resource uses from those areas. Managing more than one resource in each priority area is the essence of multiple-use management. However, the management priority area does indicate which resource would be considered most important when resolving potential resource conflicts. This should be kept in mind when reviewing the alternative maps because lower priority resource allocations are not displayed, even though they may not be in conflict with the higher priority programs. Development of the alternatives is further described in Appendix F.

All of the alternatives recognize the existence of valid and existing rights, such as oil and gas leases, mining claims, and rights-of-way grants.

Alternatives Eliminated From Detailed Study

A no grazing alternative for Section 15 lands was considered by the planning team but not developed for the following reasons:

1. North of Baker County, 50,397 acres of BLM

land are scattered throughout 7 million acres in six counties. 39,244 acres are being leased for grazing under Section 15 of the Taylor Grazing Act. The average size of a public land parcel is 54 acres. Approximately 1,000 miles of fence would be required to exclude livestock, at a minimum cost of $2 million to construct. Annual maintenance costs would be substantial and in addition to this estimate. Such fencing would cause major impacts: established patterns of wildlife movement would be disrupted, public access would be impaired, and considerable soil and vegetative disturbance would occur during construction.

Without fencing, exclusion of grazing on so many scattered tracts over such a large area would be essentially impossible to enforce.

It should also be noted that 11,153 acres of BLM are currently not under grazing leases due to topography, resource conflicts, etc.. Livestock grazing is not proposed for these lands under the preferred alternative.

2. Public comments received during the issue identification, criteria development and alternative selection steps indicate a general acceptance of livestock grazing on public land, provided that grazing is properly managed.

Management Guidance Common to All Alternatives

Many resource management practices are mandated by laws, regulations and policies and would be applied under all alternatives. The following summary describes, for some resources, management guidance that is common to all alternatives. A more comprehensive and detailed presentation of common management practices and standard project design features is found in Appendix G.

Requirements for Further Environmental Analysis

Site specific environmental analysis of all proposed resource projects and activity plans is required by law and would be conducted under all alternatives. Based on these environmental analyses, mitigation measures would be developed to resolve resource conflicts and prevent or minimize adverse impacts to resource values. Environmental analyses and mitigation measures address all affected resources, including cultural values, wildlife and and fish habitat, threatened and endangered and special status species, riparian habitat, and watershed and air quality concerns.

Grazing Management

The vast majority of grazing lands in the planning area (379,357 acres) are administered under Section 3 of the Taylor Grazing Act. As discussed in Chapter 1, this RMP/EIS will not readdress the grazing management program on Section 3 grazing lands.

The grazing management program for Section 3 grazing lands was established in the 1981 Ironside Rangeland Program Summary (RPS). The Ironside RPS was designed to meet BLM's multiple resource management objectives, and consists of the following major actions:

1) Allocation of livestock forage to livestock and wildlife;
2) Implementation of grazing systems and/or significant management changes on 88 intensive management allotments;
3) Development of proposed range improvements on the intensive management allotments;
4) Continuation of non-intensive management on 169 allotments;
5) Monitoring and evaluation of resource conditions, including the condition of riparian zones, that are affected by implementation of the Ironside RPS.

The Ironside RPS will continue to be implemented under all alternatives.

The second periodic update to the Ironside RPS is attached to this document for your review. The RPS update describes the current status of the rangeland management program for Section 3 grazing lands in the planning area. It describes range development progress, development of allotment plans, changes made in grazing systems to achieve upland and riparian ecosite objectives, and provides various data summaries of the Ironside grazing program.

The Ironside RPS Update is attached for information purposes only and does not constitute a proposed action under the preferred or any other alternative. It is essentially a supplement to the description of the existing management direction. For more detailed information on the development of the Ironside grazing management program, please refer to

Table 25 Priorities for Habitat Management Plans (HMP)

HMP Priority Areas	BLM Acres	Wildlife Species
Wildlife Protective Area[1] (Exclosures)	2,100	Nongame birds
Burnt River[1]	50,000	Trout, bighorn sheep, turkey
Big Lookout Mtn.[1]	25,000	Deer, elk, grouse
Keating[2]	30,000	Deer, turkey
Powder River Canyon	6,000	Deer, raptors
Virtue Flat-Pritchard Creek	47,000	Antelope, raptor, sage grouse
Homestead-Sheep Mtn.[2]	30,000	Bighorn sheep, deer, turkey
Daly Creek	22,500	Deer
Immigrant[2]	15,000	Deer
Durkee	12,000	Deer
Pedro Mtn. Area	36,000	Deer, elk, grouse, fish, antelope
Unity	11,000	Antelope, sage grouse
Total	286,600 Acres	

[1]MP currently being prepared.
[2]Sharp-tailed grouse reintroduction will occur in these HMP areas.

the Ironside Draft Grazing Environmental Impact Statement, Ironside Final Environmental Impact Statement, Ironside Rangeland Program Summary and Record of Decision.

Riparian Zones and Aquatic Wildlife Habitat

Management action within Section 15 grazing area riparian zones will include measures to protect or restore natural functions (Appendix G), as defined by Executive Order 11988 and 11992.

Wildlife and Fish Habitat Management

Wildlife improvement projects would be implemented under all alternatives, and would include prescribed burns, small clearcuts, plantings, seedings, interseedings, fencing and streambank improvements. Habitat management plans will be prepared for all wildlife habitat areas identified in Table 25. Existing cooperative agreements with ODFW and WDG on Cooperative Wildlife Management Areas will continue under all alternatives (Table 4).

All forage on 3,700 acres (approximately 350 AUMs) will be allocated to wildlife. All of this forage is located within the Cooperative Wildlife Management Areas.

Threatened, Endangered or Sensitive Species

A survey will be conducted for threatened, endangered or sensitive plant species prior to implementing proposed vegetative manipulation or surface disturbing activities. No activities will be permitted that would jeopardize the continued existence of such species. Management activities in the habitat of threatened, endangered or sensitive species will be designed specifically to benefit these species through habitat improvement or acquisition.

ODFW, WDG and/or the U.S. Fish and Wildlife Service (USFWS) will be consulted before implementing projects that could affect habitat for threatened, endangered or sensitive species. If a possible adverse impact on threatened or endangered species is determined through the BLM's biological assessment process, formal consultation with the USFWS would be initiated under Section 7 of the Endangered Species Act of 1973, as amended.

Young ferruginous hawk.

Forest Management

A new forest inventory completed in 1985 redefined the sustainable harvest base acreage for the planning area. This revised base acreage will be used under all alternatives to determine the sustainable harvest level for the next 10-year allowable cut period, which begins in 1988.

Realty Management

Public lands in areas of high public use or that have high potential for unauthorized use will be signed to the extent practicable with available funding.

Mineral Resource Management

Federal mineral estate lands not withdrawn from mineral entry will remain open and available for mineral development. BLM policy encourages development of public land mineral resources in a manner that satisfies national and local needs and provides for economically and environmentally sound exploration, extraction and reclamation practices.

All surface disturbance resulting from locatable mineral development will be regulated under the 43 CFR 3809 and 3802 regulations (see Appendix G). Notices of noncompliance will be issued where operators fail to prevent unnecessary or undue degradation of the public land. In these instances BLM will require suspension of operation until compliance errors or violations are corrected.

Unleased BLM administered mineral estate open to oil and gas leasing will be leased to qualified applicants. Proposed oil and gas development activities will be evaluated using the Vale District Programmatic Environmental Analysis. Geothermal lease applications will be evaluated by an environmental review prior to issuance of a lease.

As funds are available, tracts in the Troy Basin with lignite potential will be inventoried as part of the continuing resource inventory process.

Common varieties of sand, gravel, stone and cinders will continue to be sold. Government entities and nonprofit organizations will continue to obtain mineral materials through free use permits. New quarry sites will be developed as needed, if they are consistent with protection of other resource values.

Material site rights-of-way will continue to be reviewed jointly with the Oregon Department of Highways. Those that are no longer needed will be revoked and reclaimed. Some may be replaced with free use permits.

Recreation

The lower segment of the Grande Ronde River from the confluence of the Wallowa River to the Snake River has been identified in the Nationwide Rivers Inventory for study for wild and scenic values. Also included for study are Joseph Creek and portions of the Snake River. The BLM will protect the natural character of its lands along these rivers, pending determination of the rivers' suitability for designation under the Wild and Scenic Rivers Act. Protection will be at the same level under all the alternatives.

Under all alternatives, the natural qualities of public land in the Goosenecks National Natural Landmark (Grande Ronde River) will be protected and maintained.

Cultural Resources

Any ground disturbing projects or activities on BLM land, or authorized BLM action, will comply with Section 106 of the National Historic Preservation Act (as amended), Executive Order 11593, federal regulations (36 CFR 800, 36 CFR 60) and BLM manual directives for protection and management of cultural resources (see Appendix G). The State Historic Preservation Offices of Oregon and Washington and the National Advisory Council on Historic Preservation will be consulted when appropriate. All National Register or National Register eligible cultural properties will be protected and maintained.

Under all alternatives, cooperative agreements for surveillance and patrol will be developed with other federal agencies to enhance protection of cultural resources located outside Baker County.

Wilderness

The Bureau's Interim Management Policy for Wilderness Study Areas will continue to guide management in the three WSAs in the planning area. The possibility that these areas may be designated as wilderness will be recognized in all land use decisions.

Under all alternatives, the recently designated McGraw Creek Wilderness Area will be managed by the U.S. Forest Service under cocperative agreement.

Visual Resources

Visual resources in the planning area have been classified according to the BLM's visual resource management criteria. These criteria include scenic quality, visual sensitivity and viewing distance, and have resulted in the Visual Resource Management (VRM) classifications shown in Table 18 and Map 5. The four VRM classifications establish management objectives and the degree of visual change that will be acceptable within a landscape.

Class I areas only permit ecological change to occur; no management actions that would change the natural landscape are allowed. There are currently no Class I areas on BLM lands in the planning area. In Class II areas management actions are not allowed to be visible on the landscape. In Class III areas management actions may be visible but may

Sorting Logs. Hess 88 Timber Sale, Wallowa County.

not dominate the landscape. In Class IV areas management actions are allowed to be visible and generally unrestricted with regard to their effect on the landscape.

All proposed projects will be evaluated against VRM classifications. Projects that do not not meet VRM objectives will either be redesigned, mitigated or cancelled.

Special Management Areas

Management plans will be developed and special management prescriptions will be implemented in all areas designated as SMAs, commensurate with available funding. Where needs are identified in specific management plans, fencing or signing will occur to protect unique natural and high scenic values. Lands may be acquired to benefit and enhance resource values in designated special management areas. All existing cooperative management agreements involving SMAs will be continued.

Ten possible SMAs were identified as requiring additional study (Table 26). In cooperation with the Natural Heritage Programs of Oregon and Washington, these areas, and any new areas that may be identified, will be evaluated to determine if they meet the criteria for ACEC designation. Appropriate protection measures would be implemented until formal designation could be made in an RMP amendment.

Noxious Weed Control

Infestations of noxious weeds are known to occur on some public lands in the planning area. The most common noxious weeds are diffuse, spotted and Russian knapweed, yellow starthistle, Canadian thistle, whitetop and yellow leafy spurge. Control methods will be proposed and subjected to site specific environmental analyses. Control methods will not be considered unless the weeds are confined to public lands or control efforts are coordinated with owners of adjoining infested private lands.

BLM has recently completed an environmental impact statement on noxious weed control on BLM lands in Oregon, Washington, Idaho, Montana and Wyoming. Copies of the Northwest Area Noxious Weed EIS are available through the Vale District Office.

Grasshopper Control

Grasshopper outbreaks occur periodically on and adjacent to public lands in the planning area. A 93,000 acre area that included 41,000 acres of public land was sprayed in 1985, and a similar area was sprayed in 1980.

The Animal and Plant Health Inspection Service USDA prepared a "Rangeland Grasshopper Cooperative Management Program" in 1980, and in January 1986 issued a draft Environmental Impact

Table 26 Possible Special Management Areas

Area	Potential Designation	Acreage	Source	Values
Grande Ronde River (FS Boundary, 59 mi. downstream; including Snake River in Washington)	ACEC	9715	BLM	Candidates for National Wild & Scenic Rivers (Grande Ronde, Snake), anadromous fishery, bald eagle wintering and potential nesting habitat, elk winter range, bighorn sheep winter range, outstanding scenic, Goosenecks National Natural Landmark, portion of National Register Archaeologic District, watershed, recreation.
Joseph Creek (5 miles between Tamarack and Cottonwood Creeks at Ore-Wa boundary)	ONA/ACEC	3360	BLM	Candidate for National Wild and Scenic River, fourth order stream segment with cottonwood and hawthorn riparian vegetation (ONHP cell need), outstanding geologic example of rejuvenated stream erosion process and gooseneck meanders, outstanding scenic, bald eagle and bighorn sheep winter habitat, anadromous fishery, recreation, watershed.
Keating Riparian (Clover, Balm, Sheep, Sawmill Creeks: NE of Baker)	RNA/ACEC	3120	BLM Nature Conservancy	Low elevation riparian vegetation (ONHP cell need), potential sharp-tailed grouse reintroduction habitat, crucial deer winter range, cultural values.
Powder River Canyon (Between Thief Valley Res. and Hwy 203)	ACEC	5880	BLM Nature Conservancy	Excellent raptor nesting and foraging habitat, bald eagle winter habitat, wildlife habitat, scenic, cultural.
Unity Reservoir Bald Eagle Potential Nest Management Area	ACEC	200/160*	BLM U.S. Forest Service	Cooperative agreement management area, identified as potential nesting habitat on North Fork of the Burnt River for bald eagles resident in the Unity Reservoir Area.
Haplopappus radiatus (Jordan Creek)	ACEC	120	BLM	Locality of candidate Federal T&E plant.
Hunt Mountain (West of Baker)	ACEC	2230	BLM Nature Conservancy	State sensitive plants, diverse sub-alpine plant communities, mountain goat habitat, wildlife habitat, whitebark pine community, scenic.
Oregon Trail (Baker Union, Umatilla counties)	ACEC	1495	BLM	Historic sites of the Oregon National Historic Trail (including wagon ruts), at Chimney Creek, Straw Ranch, White Swan, Flagstaff, California Gulch, and Echo Meadows. Unique cultural and sensitive visual qualities, recreation values.
Little Lookout Mountain (SE of Baker)	ACEC	3220	BLM	Diverse bunchgrass, fir, and aspen communities, wildlife habitat (summer range for deer), formerly sharp-tailed grouse habitat.
Big Lookout Mountain Aspen (SE of Baker)	ACEC	1500	BLM	Unique aspen cover, crucial deer summer range, watershed.

Table 26 Possible Special Management Areas (continued)

Area	Potential Designation	Acreage	Source	Values
Sheep Mountain (Between Pine Cr. and Oxbow Reservoir)	ACEC	5398	BLM	Crucial bald eagle wintering habitat, outstanding scenic, diverse plant communities, wildlife habitat.
Homestead (Snake River Breaks between Pine Cr. and Nelson Cr.)	ACEC	8537	BLM	Bald eagle wintering habitat, outstanding scenic, wildlife habitat, deer winter range, scenic, special plant species.
Love Reservoir (East of Baker)	Needs further study	640	ONHP Data Base	Waterfowl habitat, bunchgrass communities.
Burnt River Canyon (Baker Co.)	Needs further study	6720	BLM Nature Conservancy	Unusual and diverse plant communities, wildlife habitat, bighorn sheep reintroduction sites, riparian habitat, scenic, and watershed, cold water fisheries.
Snake River Breaks (Brownlee Dam to Huntington)	Needs further study	9600	BLM Nature Conservancy	Bald eagle habitat, scenic, watershed, crucial big game winter range.
Juniper Canyon (Umatilla Co.)	Needs further study	1648	BLM	Unstabilized sand ecosystems.
Mt. Harris (Union Co.)	Needs further study	40	BLM	Past, potential barred owl nesting habitat.
McNary Ponds (Umatilla Co.)	Needs further study	340	BLM	Possible waterfowl habitat.
Unity Paleontiological Area (Baker Co.)	Needs further study	3200	BLM	Vertebrate and plant fossils.
Squaw Creek Drainage (Umatilla Co.)	Needs further study	720	ONHP Data Base	Portion of a watershed supporting fish habitat.
Thief Valley Reservoir (Powder River)	Needs further study	50	ONHP Data Base	Possible pygmy rabbit habitat.
Table Rock (Northwest of Huntington)	Needs further study	3200	Nature Conservancy	Big sage, stiff sage/bunchgrass communities.

[1]Oregon Natural Heritage Program.
* 160 acres under Reclamation withdrawal not designated, but to be managed by BLM to protect values.

Statement as a supplement to the grasshopper cooperative management program. BLM will prepare an environmental assessment on grasshopper control on BLM land during 1986.

Withdrawal Review

Review of other agency withdrawals is expected to be completed in 1991, as required by the Federal Land Policy and Management Act of 1976, Section 204 (1). These withdrawals will be continued, modified or revoked. Upon revocation or modification, part of all of the withdrawn land may revert to BLM management. Current BLM policy is to minimize the acreage of public land withdrawn from mining and mineral leasing, and, where applicable, to replace existing withdrawals with rights-of-way leases, permits or cooperative agreements. Approximately 140,000 acres of land administered by other federal agencies will be involved in this withdrawal review.

Current Management Situation (No Action Alternative)

Grazing Management

Section 15 grazing areas were established where small, isolated parcels of public land are interspersed within larger acreages of private land. Basically, most BLM lands in the planning area north of Baker County are managed as Section 15 grazing areas. This totals about 50,397 acres of BLM land that are scattered among 7 million acres in six counties. Presently, 39,244 of these acres are allocated for grazing, and are leased to those who own or control the contiguous private land (Appendix H). Grazing leases totaling 4,258 Animal Unit Months (AUMs) are currently issued to 110 livestock operators. See Table 27 for a statistical summary of Section 15 grazing areas.

Because in almost all cases Section 15 grazing lands are fenced within larger acreages of private land, they receive the same management as the private lands. Aside from an initial inventory to establish carrying capacities, and an occasional inspection, the BLM does not monitor or control the use made on any of these tracts. Range development projects, if any, are financed and constructed by the grazing lessee under BLM permit.

The Section 15 grazing areas (see Appendix H) have been categorized for management priority according to BLM's allotment categorization policy. They have been categorized as custodial allotments (Category "C"), and have the least opportunity and lowest priority for intensive grazing management.

Table 27 Statistical Summary of Section 15 Grazing Areas

	Section 15 Grazing Leases
Total Acres (Alloted)	39,244
Total AUMs	4,258
Number of Permittees/Lessees	110
Avg. Allot. size (Acre/AUMs)	366/38
Allotment Categoration All Category	"C"
Number of Monitoring Studies	0
Number of Water Developments	11
Acres of Seeding	0

Lands Unallocated for Grazing

There are 11,153 acres of BLM land that are unallocated for grazing. Many of these lands are too rugged to graze, while others have been reserved for other uses such as wildlife habitat and agricultural lease.

Riparian Zone Management

Riparian zone inventories would continue on the 10 miles of perennial streams that have not been inventoried. Because of the small, fractioned land ownership patterns, riparian improvement projects would be done as part of coordinated plans with private landowners and other government agencies.

Wildlife Habitat Management

BLM would continue to work closely with the Oregon Department of Fish and Wildlife and the Washington Department of Game to coordinate wildlife habitat management with population objectives and priorities.

Integration of wildlife habitat goals and stipulations into other BLM programs would continue. For example, wildlife stipulations would include forest openings of proper size and shape, desirable seeding mixtures, needed road closures, wildlife access to water developments, riparian buffers and numerous other measures to minimize disturbance or enhance wildlife habitat.

Inventory and monitoring would continue for riparian habitats, fisheries habitats, crucial big game seasonal ranges and raptor habitats. Vegetation mapping using Standard Habitat Sites has been

conducted on about one third of the public lands in Baker County and would continue.

Spring overflow areas would continue to be evaluated for management. Existing exclosures would be maintained.

All currently identified habitat management plans (see Table 25) would continue to be prepared and implemented, as funding allows. Wildlife and stream habitat enhancement would continue where opportunities exist.

Reintroduction of endemic wildlife species would be evaluated as potential sites are identified by ODFW and WDG.

Threatened, Endangered and Sensitive Species Management

No activities would be permitted that would jeopardize the habitat of threatened, endangered or sensitive (T&E) species. Inventories to locate T&E species would continue. The Oregon Department of Fish and Wildlife and/or the U.S. Fish and Wildlife Service would be consulted before implementing projects that may affect habitat for T&E species.

Ferruginous hawk nesting platforms would continue to be monitored and maintained. Platforms that have not been utilized would be relocated.

Inventories to identify suitable habitats for reintroducing Columbian sharp-tailed grouse would be continued.

Land Tenure and Realty Management

Land Tenure Adjustment

Existing planning documents identify 880 acres, primarily agricultural land, that are recommended for transfer from public ownership. Over the last 5 years 420 acres have been offered for sale and 130 acres have sold. In accordance with previous planning documents, 20,000 acres would continue to be considered as suitable for disposal to improve BLM land ownership patterns and management efficiency.

Currently, one land exchange proposed by the Nature Conservancy is being considered. Land exchanges would continue to be considered on a case-by-case basis.

The Recreation and Public Purposes Act (R&PP) provides for the sale or lease of public land to meet the needs of state and local governments and nonprofit organizations. BLM has issued ten R&PP leases in the planning area; four for sanitary landfills, two for state parks, one for a historic monument, one for a rifle range and one for a city park. R&PP leases would continue to be issued as needed.

Access and Rights of Way

Access easements are acquired primarily for access roads for timber harvest, and would continue to be acquired on a case-by-case basis. The existing level of public and administrative access to BLM lands is shown in Table 28. Although substantial legal public access exists to most of the planning area, the need for additional easements is anticipated to meet resource objectives, particularly in the forestry and recreation resource programs.

An average of 10 to 15 rights-of-way are issued each year for purposes such as water pipelines, ditches, access roads and underground telephone lines. Rights-of-way would continue to be issued by BLM on a case-by-case basis.

Utility Corridors

Existing utility and multipurpose transportation corridors generally follow the main valleys and Interstate 84, and are in conformance with Western Utility Corridor Study recommendations. Additional utility needs would be confined to existing corridors when practical. New facilities would be excluded from only those sites or areas required by Federal law, Executive Orders, or existing planning documents. Refer to Map 6 for the location of electric transmission lines of 69 kilovolts or larger, pipelines and existing communication sites.

Use Authorization

Section 302 of the Federal Land Policy and Management Act (FLPMA) provides for use authorization for a variety of purposes. Use authorization would continue to be considered on a case-by-case basis.

Mineral Resource Management

The 30 to 40 notices of operation received each year from mining operators would continue to be processed. In addition one plan of operation has been filed and would continue to be monitored. Mining operations would continue to be monitored an average of once each year.

Table 28 Existing Public and Administrative Access

Mgmt Area	No Legal Access # of Parcels	Acres	%(Ac)	Adm Access # of Parcels	Acres	%(Ac)	Public Access # of Parcels	Acres	%(Ac)
Grande Ronde and Blue Mountain	225	18,290	37.3	31	2,070	4.2	158	28,580	58.5
Baker	196	28,120	7.5	11	4,440	1.2	109	344,657	91.3
Planning Area	421	46,410	10.9	42	6,510	1.5	267	373,237	87.6

Federal mineral estate in the planning area has been evaluated and placed in oil and gas leasing categories as follows:

(1) 891,640 acres are open to leasing;
(2) 22,215 acres are open to leasing with "no surface occupancy" stipulation;
(3) 25,145 acres are closed to leasing.

Of the acres closed to leasing, 14,825 acres is land within the three WSAs and the McGraw Creek Wilderness. If they are not designated as wilderness, the 13,857 acres within the three WSAs would be categorized as open for leasing with seasonal stipulation to protect wildlife.

Some of the other lands included in the closed to leasing category are managed by the Bureau of Reclamation or Army Corps of Engineers rather than BLM. This categorization would remain in effect.

Mineral material sales and free-use permits would continue to be authorized from the one developed community pit and other existing sites on a demand basis.

Soil and Watershed Management

Soil and watershed management stipulations would continue to be applied on a case by case basis to proposed resource development projects and surface disturbances. Stipulations would be developed to maintain water quality, minimize runoff and surface erosion, and to stabilize and rehabilitate disturbed areas. They would continue to be specified in appropriate activity plans and environmental assessments, including fire rehabilitation plans, mining plans of operation and habitat management plans.

The Morgan Creek Watershed Plan would continue to be implemented. This plan provides for BLM installation of a variety of instream structures, adoption of streambank protection methods, vegetative plantings and prescribed grazing systems to reduce soil erosion and improve habitat quality in the watershed.

An ongoing inventory of surface water, including wells, reservoirs and springs would be completed in 1987.

Forest Management

A forest inventory completed in 1974 identified 31,290 acres of commercial forest land. Resource planning decisions at that time excluded harvest on 3,044 acres because of topographic restrictions. The remaining 28,246 acres became the forest land base upon which the current Baker Resource Area portion of the Eastern Oregon-Washington, BLM 10-year sustainable harvest level was calculated. The sustainable harvest level was restricted on 623 acres due to multiple use considerations.

The current 10-year sustainable harvest level was established at 28 million board feet (MMBF), and was implemented in 1978. By 1985, total volume sold was 26.5 MMBF, leaving a 1.5 MMBF available cut for the remaining two years of the sustainable harvest decade, which ends in 1987.

Each year, about 200 acres are partially cut, 38 acres are clearcut and 1 to 5 miles of low standard roads are constructed to implement the sustainable harvest level. Most of these roads are rehabilitated as a condition of the timber sale contract. Refer to Appendix G for a discussion of standard design features for the forestry program.

Table 29 Determination of Sustainable Harvest Levels

	Alternatives			
	No Action	Commodity Production	Natural Environmental Protection	Preferred
Total Forest Land Management Area (Acres)	88,949	88,603[1]	88,603	88,603
Noncommercial Forest (Woodland Acres)	57,659	59,273	59,273	59,273
Suitable Commercial Forest Land (Acres)	31,290[2]	29,330[3]	29,330	29,330
Suitable Forest Lands not Available for Management of Forest Products (Acres)				
Economically Non-Operable[4]	3,044	3,304	3,304	3,304
Special Management Areas[5]	0	0	693	673
Total	3,044	3,304	3,997	3,977
Lands Available for Management of Forest Products (Acres)	28,246	26,026	25,333	25,353
Lands Available for Restricted Management of Forest Products (Acres)[6]				
Special Management Areas	0	0	2,568	2,484
Other Multiple-Use Emphasis	623	1,810	3,981[7]	1,430[7]
Total	623	1,810	6,549	3,914
Lands Available for Intensive Management of Forest Products (Acres)	27,623	24,216	18,787	21,439
Approximate Sustainable Decadal Timber Harvest Level (MMbf)[8]	28.0	29.0	23.0	27.0
Woodlands Management Area (Acres)	57,659	59,273	59,273	59,273
Non-suitable woodlands (Acres)	18,000	18,000	18,000	18,000
Suitable Woodlands (Acres)	39,659	41,273	41,273	41,273
Suitable Woodlands not Available for Management of Woodland Products (Acres)				
Mule Deer Winter Range	0	0	4,000	4,000
Lands Available for Management of Woodland Products (Acres)	39,659	41,273	37,273	37,273
Lands Where the Woodlands will be Managed to Enhance Other Uses (Acres)	0	0	1,500[7]	0
Lands Available for Intensive Management of Woodland Products (Acres)	39,659	41,273	35,773	37,273
Approximate Sustainable Decadal Harvest Level (Cords)[9]	[10]	11,000	8,600	9,800

[1]Reduction of acreage due to transfer of 346 commercial forest acres to the Hells Canyon National Recreation Area.
[2]Results of the 1974 inventory upon which the current average annual harvest of 2.8 MMbf is based (No Action).
[3]Results of the 1984 inventory upon which the new harvest level will be declared beginning in 1988. Reduced acreage is due to HCNRA land transfer, improved inventory procedures, and new guidelines which shifted certain commercial forest lands into the woodlands category.
[4]Commercial forest lands which are geographically isolated to the extent that logging costs would likely be greater than timber value during the current planning cycle.
[5]882 acres proposed for Special Management are also economically non-operable, and are included in the economically non-operable acreage total.
[6]Intensive timber management limited by other resource considerations. Opportunity to harvest area-wide average annual timber yield of 114 bd.ft./acre would be reduced by these considerations.
[7]Represents a percentage of the available acres which would be managed to emphasize or enhance other resource values.
[8]A sustainable 10-year timber harvest level for all of Eastern Oregon is being recalculated from data collected during the 1985 forest inventory. If the results of this inventory, or any subsequent inventories, indicate a change in annual productivity, sustainable harvest levels would be adjusted accordingly.
[9]There is no inventory of standing volume on Resource Area woodlands. Approximate sustainable 10-year harvest level was estimated by assuming a current average volume of 4 cords per acre and a period of 150 years for a woodland stand to reach maturity. A woodlands inventory could result in an adjustment to the estimated sustainable harvest level.
[10]There is no current declared sustainable harvest level on Resource Area woodlands.

Grande Ronde River, Wallowa County

Planting, commercial and precommercial thinning, and site preparation are dependent upon funding for these purposes.

Resource Area woodlands are currently under limited management with no established sustainable harvest level (Refer to Table 29).

Refer to Table 30 for a description of forest management practices by alternative.

Fire Management

The fire management policy of the Baker Resource Area has evolved significantly over the past several years. In the past almost all fires were suppressed as quickly and completely as possible. Today fire management tries, wherever feasible, to take advantage of the natural role of fire in forest and rangeland ecosystems. Prescribed burning has increased to improve wildlife habitat and range and forest conditions, and modified suppression of natural ignitions is considered to help achieve resource conditions. This emphasis would continue.

Since 1978 about 1200 acres have been burned using prescribed fire to improve wildlife habitat and rangeland forage production, and for forest management. The resource area intends to increase the use of prescribed burning in the future. The cooperative BLM-FS fire management plan for the Elkhorn Range would continue.

Rehabilitation and the seeding of native and non-native species would continue to be considered on a case-by-case basis.

Cultural Resource Management

All National Register-eligible sites would be protected and maintained, and monitoring would occur according to the availability of funding. Oregon Trail sites would be monitored annually. The condition of many cultural sites would remain unknown due to lack of monitoring.

Table 30 Forest Management Treatment by Alternative - First Decade

	No Action	Commodity Production	Natural Environmental Protection	Preferred
Lands available for intensive management of forest products (acres)	27,623	24,216	18,787	21,439
Lands available for restricted management of forest products or managed to enhance other uses (acres)	623	1,810	6,549	3,914
10 Year Harvest				
Total Million bd. ft.	28	29	23	27
Total Million cu. ft.	4.6	4.8	3.8	4.4
Transportation System (miles/acres)[1]				
New Construction	34/66	35/68	27/52	32/62
Timber Harvest (acres)				
Clearcut	375	400	300	350
Partial Cut[2]	1,957	2,018	1,618	1,868
Timber Harvesting Methods (acres)				
Cable	700	725	575	665
Tractor	1,632	1,693	1,343	1,553
Site Preparation/Slash Disposal (acres)				
Prescribed Burning	1,865	1,934	1,534	1,774
Lop and Scatter	467	484	384	444
Artificial Reforestation (acres)[3]	[4]	360	290	330
Precommercial Thinning (acres)	[4]	2,000	1,580	1,860

Note: These figures are estimates based upon historical averages and the current 5-year timber sale plan. These estimates were made to facilitate impact analysis highlighting differences between alternatives. Although actual acreages may vary with implementation and funding, the relationship between alternatives is expected to remain unchanged. The estimates also do not account for additional needs which may arise from wildfires, windstorms, or other unplanned events.

[1]Surface disturbance from road construction amounts to approximately 1.9 acres per mile.
[2]Includes commercial thinning.
[3]Includes both clearcuts and underplanting in partial cuts
[4]Surveys are currently being performed to determine the extent of the reforestation and PCT backlog. Additional funding has recently been provided to meet the most critical needs as they are identified.

Specific stabilization and protective measures have been identified for cultural sites at Amelia and Malheur Cities, a pictograph site, portions of the Oregon Trail and selected sites in the Unity area. None of these measures have been implemented.

Three sites have been recently vandalized, and natural weathering continues to deteriorate several cultural properties. Warning signs to vandals have been placed at sensitive sites, but are not believed to be effective.

Paleontological Resource Management

Paleontological resources would be inventoried and protected in response to individual surface disturbing projects or land tenure adjustment actions.

Recreation Management

Recreation lands in the planning area have been identified as a Special Recreation Management Area (SRMA), or classified as part of an Extensive Recreation Management Area (ERMA). (See Table 31).

Table 31 Estimated Visitor Use on BLM Administered Public Lands

Recreation Management Area	County	1984 Estimated Visitor Days	Primary Recreation Activities
SMRA			
Oregon National Historic Trail at Flagstaff Hill	Baker	6,000	Historical Interpretation Sightseeing
Grande Ronde Rv	Union, Asotin, WA Wallowa	24,000	Floating, Fishing, Hunting, Sightseeing
ERMA - Use Area			
Spring Rec Site	Baker	56,000	Camping, Boating, Fishing, Hunting
SF Walla Walla River	Umatilla	11,000	Camping, Fishing, Hunting, Sightseeing
Bassar Diggins	Baker	4,000	Camping, Hunting,
Burnt River	Baker	6,000	Camping, Fishing, Hunting, rockhounding
Sheep Mountain	Baker	6,000	Backpacking, Hunting, horseback riding
Oxbow Mountain	Baker	4,000	Hunting, Horseback riding, Backpacking
Lookout Mountain	Baker	8,000	Hunting, Sightseeing
Virtue Flat	Baker	6,000	Off-Road Vehicles
Denny Flat	Baker	2,000	ORV, Sightseeing
Snake Rv Breaks	Baker	28,000	Hunting, Sightseeing
Powder River	Baker	8,000	Fishing, Hunting, Hiking
John Day River	Umatilla	5,000	Fishing, Hunting, Bckpckng
Brownlee Resv	Baker	47,000	Fishing, Boating, Sghtsng
Hells Canyon Rsv	Baker Wallowa	36,000	Fishing, Boating, Sghtsng
Total		247,000	

Special Recreation Management Areas

Special Recreation Management Areas are generally of national or regional importance and require intensive management to achieve recreation objectives. There are two SRMAs in the Resource Area: the Grande Ronde River and the Oregon National Historic Trail, the latter of which contains an interpretive site at Flagstaff Hill.

The cooperative agreement with the FS for management of the Grande Ronde River would continue. Commercial river permits on the Grande Ronde River would continue to be administered by the Forest Service. The BLM would not prepare a comprehensive management plan for the Grande Ronde, but would begin a river ranger program on the river, as funding allows.

The interpretive site at the Flagstaff Hill Oregon Trail Segment would be maintained but no new interpretive sites would be developed. The resource area would continue to work with local organizations to help manage trail sites in the planning area.

Extensive Recreation Management Areas

Extensive Recreation Management Areas are areas where recreation opportunities and problems are more local in character, and generally less intensive management is needed to achieve recreation objectives. Except for the two SRMAs discussed

above, the entire planning area has been identified as an Extensive Recreation Management Area. Fourteen use areas have been identified within the ERMA. The Spring Recreation Site facilities would be maintained and improved as funding becomes available. The South Fork of the Walla Walla River Recreation Site would be managed by Umatilla County under a Recreation and Public Purposes Act agreement. The Bassar Diggins facilities would be maintained as funding becomes available.

Off Road Vehicle Use

BLM lands in Baker County and a small amount of BLM land in Umatilla County have been designated for ORV management under Executive Order 11644. Under this designation, 968 acres (McGraw Creek Wilderness Area) are closed, 119,560 are limited for wildlife and watershed protection, and 260,440 acres are open to ORV use. (See Table 32 and Map 5.) BLM lands in the northern part of the planning area (48,786 acres) have not been designated, but are considered open until designation would occur.

Virtue Flat and the Durkee area in Baker County are designated areas for ORV use and approved competitive events. Several large ORV events are held each year on Virtue Flat. Impacts on mining interests have been mitigated through consultation with users and stipulations on special recreation permits issued for competitive events. However, restroom facilities, control barriers and some course development are needed.

Special Management Areas

None of the 12 possible special management areas (SMAs) identified during the planning process would be designated as ACECs under this alternative. However, special resource values that occur in these areas (see Table 26) would be generally protected under existing authorities and management directions, through stipulations on surface disturbing activities, and by restricting incompatible uses.

Bald eagle habitat in SMAs would be protected and preserved consistent with the Endangered Species Act and Pacific States Bald Eagle Recovery Plan, by excluding incompatible uses in critical habitat areas. Non-game bird habitat in special management areas would be protected or maintained.

Wildlife habitat in SMAs would continue to be managed for big game, consistent with the objectives of the Oregon Department of Fish and Wildlife and Washington Department of Game.

Riparian areas in the Grande Ronde, Snake River and Joseph Creek special management areas would be protected or restored to natural conditions under existing authorities. Depending upon current condition classes and priorities, riparian zones in other special management areas would be managed to maintain or improve conditions by intensive livestock management or fencing, in accordance with the Ironside RPS.

Existing designations for limitations of off-road vehicle use would be continued in the Powder River Canyon, Homestead, Sheep Mountain, Big Lookout Mountain and Unity Reservoir areas.

GRANDE RONDE RIVER, SNAKE RIVER, JOSEPH CREEK: Public lands along the Grande Ronde River, Joseph Creek and Snake River would be managed consistent with maintaining the eligibility of these streams under the National Wild and Scenic Rivers Act. The BLM and FS cooperative management agreement on the Grande Ronde River in Oregon would continue. The unique qualities of the Goosenecks National Natural Landmark (Grande Ronde River) on BLM lands would be protected and maintained.

HOMESTEAD, SHEEP MOUNTAIN: The Sheep Mountain WSA, Homestead WSA and McGraw Creek WSA would continue to be managed under the BLM Interim Management Policy to maintain their wilderness suitability.

UNITY RESERVOIR BALD EAGLE HABITAT: The Unity Reservoir bald eagle potential nest management area (360 acres on BLM land) would be managed to protect bald eagle habitat by excluding incompatible uses, limiting timber harvest to prescriptions that promote perch and nest trees, and maintaining existing old growth timber.

HAPLOPAPPUS RADIATUS: Population localities of Haplopappus radiatus, a federal candidate T/E plant, would be protected and maintained consistent with the Endangered Species Act of 1973, as amended.

BIG LOOKOUT MOUNTAIN ASPEN: A habitat management plan would be developed to provide habitat diversity for game and non-game species by maintaining viability of the unique aspen cover type through selective clearcutting.

HUNT MOUNTAIN: Sub-alpine wildlife and sensitive plant habitat would be protected by continuing the existing exclusion of livestock grazing.

OREGON TRAIL: The unique cultural values of the Oregon National Historic Trail on BLM lands would be protected by excluding incompatible development. No additional public information or interpreta-

Table 32 Off-Road Vehicle (ORV) Designations

Alternative	Open	Limited	Closed
A. No Action[1]	309,226	119,560	968
B. Commodity Production	306,834	121,802	1,118
C. Natural Environment Protection	287,374	141,262	1,118
D. Preferred	290,594	138,042	1,118

[1]ORV designations as determined by the Baker Management Framework Plan (MFP) and published in the Federal Register (Vol. 45, No. 101/Thursday, May 22, 1980), designated 380,968 acres of public land within the Baker Resource Area. The remaining 48,786 acres of public land within the resource area are currently undesignated, and are considered open to ORV use until designated. ORV designation on these lands is addressed in the Commodity, Natural Environment Protection, and Preferred Alternatives.

tion for sites on the Oregon Trail would be provided. These areas would remain open to off-road vehicle use.

Commodity Production Alternative

Grazing Management

Forage available on Section 15 lands would increase up to 764 AUMs by leasing unleased tracts. Most other resource activities would be allowed as long as impacts to forage production would be minor or short term.

Riparian Management

Further riparian inventories would be discontinued. Riparian exclosures would not be built if they interfered with livestock or forestry practices. Riparian management would not be emphasized in activity plans.

Wildlife Management

No special emphasis would be placed on enhancing big game habitat to meet ODFW and WDG population objectives.

Current habitat quality and diversity would be maintained. New wildlife projects would be allowed as long as they did not conflict with range, mineral or forest management.

Inventories and monitoring for wildlife resources would continue. Emphasis would be primarily on areas where site specific development and management practices from other resources are to be implemented.

Existing wildlife exclosures would be maintained. New exclosures would only be built if they did not interfere with management practices for livestock, forestry or mining.

Existing fish habitat conditions would be maintained. Improvements would be considered on an as needed basis, and only if their construction does not interfere with range, mineral or forest management.

Habitat management plans would be written on an as needed basis or when severe conflicts are identified.

Wildlife transplants of endemic species would occur only if they did not conflict significantly with other resources.

Threatened or Endangered Species Management

Site-specific assessments for T&E species would be made prior to all surface disturbing activities. Surface disturbing activities would avoid known locations of threatened and endangered (T&E) species.

Ferruginous hawk nest platforms would be maintained.

No further inventories would be conducted to identify suitable habitats for Columbian sharp-tailed grouse.

Land Tenure and Realty Management

Lands in the planning area would be evaluated and placed in one of the the following land tenure classification zones. Refer to Table 33 for the

Table 33 Land Tenure Adjustment (Acres)

Alternative	Zone 1[2]	Zone 2	Zone 3
No Action[1]	-	-	-
Commodity Production	408,652.23	8,661.77	12,440.00
Natural Environment Protection	421,092.23	8,661.77	0
Preferred	410,351.35	8,661.77	10,740.88

[1]BLM land tenure adjustment zoning does not apply. Approximately 20,000 acres would be available for land tenure adjustments. Annual disposal or exchange program would be 400-500 acres, but limited to the Baker
[2]BLM administered lands only.

preliminary land tenure classifications by alternative.

1) Lands in Zone 1 (retention) would primarily be those lands with commodity resource values and other resource values of national or statewide importance.

2) Lands in Zone 2 (unclassified) would consist of lands with insufficient information to classify in either Zone 1 or Zone 3. These lands would be placed in Zone 1 at a later date if new information indicates that the criteria for Zone 1 is met. Otherwise these lands would be placed in Zone 3.

3) Lands in Zone 3 (disposal) would be all lands that have low resource values or no resources with national or statewide significance. Lands in this zone identified for exchange would be exchanged primarily for private lands in Zone 1 that have resources of high federal interest. Acquisitions would occur in Zone 1.

Legal public access would be acquired primarily for management and use of commodity resources.

Utilities would be permitted to use existing and potential corridors and communication sites identified by industry. Only areas with mandatory protection, such as T&E species and cultural sites on or eligible for the National Register, would be excluded.

Use authorization including agricultural leases would be permitted with priority given to those uses involving commodity development.

Minerals Management

All active mining exploration and development would be monitored once each year. Operations in areas with resource values that have mandatory protection, such as habitat for T&E species or National Register-eligible sites, would receive the highest priority for compliance inspections. Environmental review of plans of operation would concentrate on protection of habitat for T&E species or National Register sites.

Table 34 summarizes oil and gas leasing categorization under this alternative. About 96 percent of the Federal mineral estate managed by BLM would be open to leasing and development with standard stipulations (see Appendix G). Areas with habitat for T&E and sensitive wildlife species would be open for leasing with restrictive seasonal stipulations. The one SMA that would be designated under this alternative would be open for leasing with a "no surface occupancy" stipulation.

Of the 14,825 acres closed to leasing, 13,857 are located within the three wilderness study areas. If these acres are not designated as wilderness, they would be categorized as open for leasing with restrictive seasonal stipulations to protect wintering bald eagles.

Mineral material sales and free use permits would continue to be authorized from the one existing community pit and other existing sites on a demand basis. In addition, as funds become available 24 potential aggregate sites would be evaluated for community pit status to maximize production of mineral materials.

Soil and Watershed Management

Proposed resource projects and surface disturbing activities would be reviewed case-by-case to ensure that soil and watersheds would be protected and surface rehabilitated. The Morgan Creek Watershed Management Plan would be implemented, but no new plans would be prepared.

Forest Management

The 10-year harvest level of commercial timber would increase to about 29 MMBF by intensive timber management on approximately 24,216 acres. Refer to Tables 29 and 30.

About 200 acres would be partially cut and 40 acres would be clearcut annually. One to 5 miles of annual road construction would be necessary. However, roads would be constructed to higher standards, and more permanent legal access would be required.

Mechanical site-preparation or burning would be performed on all timber harvest areas.

Clearcuts would be hand planted following site-preparation. Shelterwood areas would be planted within 5 years if natural reproduction was inadequate. Livestock use of harvested stands could be limited until seedlings are established. Approximately 200 acres would be precommercially thinned each year. Annual commercial thinning would amount to about 140 acres. Refer to Table 30 for forest management treatments by alternative.

Snags, cull trees, stream buffer strips and other resource mitigation would be maintained to the extent necessary to comply with minimum requirements specified by BLM policy (see Appendix G).

Approximately 41,300 acres of woodlands that are suitable for harvest would be managed for a sus-

Table 34 Comparative Oil and Gas Leasing Options

Category	Commodity Production Alternative		Natural Environment Protection Alternative		Preferred Alternative	
	Acres	Percent	Acres	Percent	Acres	Percent
Public Land Open to Development with Standard Stipulations	392,000*	41.7	181,700*	19.3	190,500*	20.3
Reserved Mineral Estate (Split Estate) Open to Leasing with Standard Stipulations	513,000*	54.6	513,000*	54.6	513,000*	54.6
Open to Development with Restrictions Seasonal Stipulations (Summer, 1 to 3 months)	10,500*	1.1	64,520*	6.9	67,740*	7.2
Open to Development with Restrictions Seasonal Stipulations (Winter, 5.5 months)	5,315*	0.6	130,447*	13.9	133,980*	14.3
Open to Development with "No Surface Occupancy" Stipulations	3,360	0.4	34,508	3.7	18,955	2.0
Closed to Leasing	14,825	1.6	14,825	1.6	14,825	1.6
Totals	939,000*	100	939,000*	100	939,000*	100

* Estimate

tainable 10-year production of about 11,000 cords of fuelwood, posts and other products. A system of routine competitive sales would be established. Limited management of 18,000 acres of nonsuitable woodlands would be continued.

It would be necessary to reduce harvest levels if funding were unavailable to perform silvicultural practices that are required to sustain the harvest levels from either commercial forests or woodlands.

Fire Management

Current fire management guidance would be followed. Suppression efforts would begin immediately. Rehabilitation and seeding of burned areas would be determined on a case-by-case basis. Prescribed fires would be used for vegetative management in various resource applications.

Cultural Resource Management

All National Register and potentially eligible sites would be protected and maintained. Intermittent monitoring on potential National Register eligible sites would occur according to the availability of funding. Annual monitoring would occur for the Oregon Trail segments on public lands.

Paleontological Resource Management

Paleontological resources would be inventoried and protected in response to individual surface disturbing or land tenure adjustment actions. Active management of sites would not occur.

Small placer gold operation on Elk Creek, Baker County

Recreation Management

The current agreement with the U.S. Forest Service (FS) for cooperative management of the Grande Ronde River would continue.

Facilities along the Oregon National Historic Trail Special Recreation Management Area (SRMA) would be maintained. Existing facilities at Extensive Recreation Management Area (ERMA) use sites would be redesigned to accommodate increased visitor use. Additional facilities would be developed on all ERMA use sites, subject to funding, if they would not conflict with minerals, forestry or range.

Off Road Vehicle Use

The current off road vehicle designations for Baker County would remain in effect, as shown on Map 5. Areas that are currently undesignated would be designated as open to ORV use, except for the Joseph Creek SMA which would be closed/limited to ORV use. ORV designations by alternative are displayed in Table 32.

Special Management Areas

Under this alternative Joseph Creek (3,360 acres) would be designated as an Outstanding Natural Area.

None of the other 11 possible SMAs would be designated. Unique resource values in these areas would continue to be protected and maintained according to existing authorities and legislation. Management objectives for the Grande Ronde, Powder River Canyon, Unity Reservoir, Haplopappus radiatus, Hunt Mountain, Little Lookout Mountain, Homestead, Sheep Mountain, and Oregon Trail would be the same as described under the Current Management Alternative.

JOSEPH CREEK: Public lands on Joseph Creek (3,360 acres), between Tamarack and Cottonwood Creeks, would be designated and managed as an ONA/ACEC to protect and preserve natural qualities of the fourth order stream riparian zone, and to protect high scenic qualities and outstanding geologic system values for educational and recreation purposes. Cooperation with the Washington

Department of Game would continue to maintain and improve big game habitat in the Chief Joseph Wildlife Managernent Area. Existing anadromous fish habitat would be maintained. Other resource development would be allowed that does not conflict with maintaining natural riparian and geologic values. Lands immediately adjacent to Joseph Creek would be closed to off-road vehicle use (150 acres). No new roads would be constructed and remaining lands would be limited to designated roads for off-road vehicle use. A "no surface occupancy" restriction for oil and gas exploration and development would be applied. Timber harvest would be excluded on 80 acres of economically non-operable timber lands.

KEATING VALLEY RIPARIAN: Good riparian conditions would be maintained by intensive livestock management only.

BIG LOOKOUT MOUNTAIN ASPEN: Forage and habitat requirements for big game species would be provided by protecting aspen communities, as long as no significant conflict occurs with other resource development.

HAPLOPAPPUS RADIATUS: Population locations would be protected and maintained consistent with the Endangered Species Act of 1973.

Natural Environment Protection Alternative

Grazing Management

Section 15 grazing leases would continue to be issued, but livestock would be excluded from about 6 miles of streams. Livestock would be excluded from 2 miles on Cable Creek, 2 miles on Sickfoot Creek and 2 miles on the Grande Ronde River that are in fair to poor condition. Authorized use would be reduced approximately 30 AUMs, depending on the method used and precise area excluded.

Riparian Management

The remaining 10 miles of uninventoried perennial riparian zones would be inventoried. Management programs for recovery would be developed on all zones not in good or excellent condition.

Surface disturbing activities would not be allowed unless impacts could be mitigated over the long term.

Wildlife Habitat Management

Wildlife habitat would be enhanced to allow ODFW big game populations objectives to be exceeded. Increased emphasis would be placed on preserving or enhancing wildlife habitat in forested habitats, particularly in woodlands and old growth areas.

Habitat manipulation would be undertaken to increase habitat diversity and quality for all wildlife species.

Inventories and monitoring would be expanded and accelerated.

Existing exclosures would be maintained or improved. Additional exclosures would be built to enhance priority wildlife species or habitats.

All fish habitat not in excellent condition would be enhanced through instream and streambank improvements, such as gabions, log dams, and plantings.

Increased emphasis would be placed on completing and implementing the Habitat Management Plans (HMPs) identified in Table 25.

Wildlife reintroduction of endemic species would be aggressively pursued with ODFW.

Threatened, Endangered and Sensitive Species Management

Threatened, endangered and sensitive (T&E) species would be protected through site specific assessment and protective stipulations on all surface disturbing activities. Known T&E plant sites would be monitored and sites would be studied to determine their range of occurrence. Inventories would be conducted to verify the existence and extent of suspected plant and animal species. Acquisition of lands that are inhabitated by the T&E species would be pursued.

More nesting platforms would be installed for ferruginous hawks in known habitats and expanded to potential habitats. Acquisitions would be identified to enhance T&E species. Winter and spring inventories on bald eagles, Swainson's and ferruginous hawks would continue to be conducted. The Cooperative Bald Eagle Management Plan for Unity Reservoir Nesting Bald Eagle would be continued.

Columbian sharp-tailed grouse would be reintroduced into suitable habitat in the planning area in cooperation with ODFW.

Land Tenure and Realty Management

Lands in the planning area would be evaluated and placed in one of the the following land tenure classification zones. Refer to Table 33 for the preliminary land tenure classifications by alternative.

1) All lands in the planning area would be placed in Zone 1 (retention) except those having diminished natural values; that is, heavily disturbed sites with little opportunity to be reclaimed to natural conditions.

2) Lands in Zone 2 (unclassified) would consist of lands with insufficient information to classify as either Zone 1 or Zone 3. Reclassification of Zone 2 lands would occur as data is acquired. Heavily disturbed lands with little opportunity to be reclaimed to natural conditions would be placed in Zone 3. Other lands would be placed in Zone 1.

3) Lands in Zone 3 (disposal) are those having diminished natural values. Disposals would be conducted primarily through exchanges to enhance or protect existing natural values. No land sales would occur.

Legal public access needed for managing other resource values would be acquired only if natural values would not be jeopardized with increased public use. All major transmission facilities would be permitted to use only existing corridors and communication sites. Expanded use of existing sites would not be allowed if it would threaten significant resource values.

No agricultural permits or leases would be issued. Unauthorized agricultural use would be terminated and lands would be reclaimed by seeding with native grasses. Other use authorizations would be permitted on a case by case basis if they would not conflict with other values.

Minerals Management

Compliance inspections on all active mining operations would be increased to two or more per year, contingent on funding, to insure protection of significant and fragile resource values such as T&E species habitat, cultural resource sites, riparian zones and fragile watersheds. Inspections of operations in areas with resource values that receive mandatory protection such as habitat for T&E species or National Register-eligible sites would be given the highest priority. Inspections of operations in areas with resource values such as other cultural resource sites, fragile riparian zones and fragile watersheds would be given the next highest priority. Environmental review of plans of operation would emphasize protective stipulations for natural and cultural values.

Table 34 summarizes oil and gas leasing categories under this alternative. About 73 percent of the Federal mineral estate managed by BLM would be open to leasing and development with standard stipulations (see Appendix G). Areas with critical habitat for big game and habitat for T&E and sensitive wildlife species would be open for leasing with restrictive seasonal stipulations. The 12 SMAs that would be designated under this alternative would be open for leasing with a "no surface occupancy" stipulation.

Of the 14,825 acres closed to leasing, 13,857 acres are located within the three wilderness study areas in the planning area. If these acres are not designated as wilderness, they would be categorized as open for leasing with a "no surface occupancy" stipulation to protect wintering bald eagles.

Mineral material sales and free use permits would continue to be authorized from the existing community pit and other existing sites on a demand basis as long as significant, fragile resource values are not disturbed. No additional community pits would be developed.

Soil and Watershed Management

All surface disturbing activities would be reviewed to ensure that soils and watersheds are protected or rehabilitated. Surface disturbance on fragile soils susceptible to wind or water erosion would not be allowed or would be minimized through more stringent mitigation stipulations.

Watershed plans would be prepared and implemented in conjunction with other activity plans on areas with high to severe potential for erosion.

Forest Management

A 10-year harvest level of approximately 23 MMBF would be sustained from a commercial timber land base of about 25,000 acres. Refer to Table 29. Timber harvest would be excluded from approximately 693 acres of forest lands located in proposed Special Management Areas. An additional 6,500 acres would be managed to maintain old growth habitat types, for protection of watersheds and riparian areas, and for protection of big game fall/winter range.

Approximately 30 acres would be clearcut and 160 acres would be partially cut each year.

An average of 1 to 3 miles of annual road construction would be limited to immediate sale requirements, with routes located and constructed to minimize impacts on other resources. Roads would be blocked and rehabilitated when current needs are fulfilled. Refer to Table 30 for forest management treatment by alternative.

Forest development practices such as site preparation and commercial thinning would be allowed only to enhance natural values, or where they would be consistent with other objectives.

Four thousand acres of woodlands would be reserved to provide cover for mule deer in winter ranges, with another 1500 acres managed to enhance other resources. The remaining 37,273 acres of woodlands suitable for harvest would be managed for an estimated 10-year production of 8,600 cords of woodland products. Woodlands that are currently unsuitable for harvest would be reserved for wildlife habitat needs.

Fire Management

A fire management plan would be prepared and implemented that emphasizes prescribed burning and management of natural ignitions to benefit habitat and meet ecosite objectives. Fires that threaten personal property, improvements or unique or special values of SMAs would be quickly and completely controlled.

Cultural Resource Management

All National Register and potential eligible sites would be protected and maintained. Intensive management (stabilization, investigations or interpretation) and monitoring of these sites would increase, commensurate with available funding. Management plans would be developed to protect the Oregon Trail. The Oregon Trail on BLM lands would be monitored annually. Twelve sites and 2 districts potentially eligible for the National Register would be evaluated for nomination.

Paleontological Resource Management

Paleontological resources would be maintained and protected in response to individual surface disturbing project proposals. Known sites would be evaluated and regularly monitored, and potential sites would be inventoried. A regional data review and evaluation of paleontological resources would be completed.

Recreation Management

The current agreement with the U.S. Forest Service for cooperative management of the Grande Ronde River would be continued.

The facilities at the Flagstaff Hill segment of the Oregon National Historic Trail Special Management Recreation Area (SMRA) would be maintained. In addition, the area would be recommended for withdrawal from mineral entry and the interpretive program would be expanded.

The existing facilities in Extensive Recreation Management Areas (ERMA) would be redesigned to mitigate site overflow damage and sanitary problems associated with increased visitor use. If funding allows, additional facilities would be developed on sites that do not have significant conflicts with soils, watershed, riparian, aquatic, cultural or wildlife resources.

Off Road Vehicle Use

The existing ORV designations for Baker County would remain in effect. In addition, the proposed Joseph Creek ONA would be closed/limited to ORV use, and the 11 other proposed SMAs would be designated for limited ORV use. Off road vehicle designations by alternative are displayed in Table 32 and shown on Map 5.

Special Management Areas

Under this alternative, all 12 possible special management areas (44,935 acres) would be designated and managed as ACECs.

JOSEPH CREEK: BLM lands on Joseph Creek (3,360 acres) would be designated and managed as an ONA/ACEC. Management objectives would be the same as under the Commodity Production Alternative. Wildlife habitat would be managed to improve forage and habitat requirements for game and non-game species. Aquatic habitat for anadromous fish would be maintained in a natural condition. Intensive management plans would be developed to preserve the natural riparian system on 5 miles of Joseph Creek. Recreation use on Joseph Creek would be limited to observational activities. Riparian vegetation would be maintained or improved through intensive livestock management or fencing. Lands would be acquired to benefit natural and wildlife values. Incompatible uses would

Little Lookout Mountain as seen from Big Lookout Mountain

be excluded. A "no surface occupancy" restriction would be applied to oil and gas leasing.

GRANDE RONDE: BLM lands (9,715 acres) on the Grande Ronde River in Oregon and Washington, and on the Snake River in Washington, would be designated and managed as an ACEC to protect wildlife habitat, enhance recreation opportunities, and promote interpretation of the area's unique values. The area would be managed to maintain and provide habitat for bald eagles, raptors, game and non-game species, and anadromous fish in cooperation with federal and state agencies. Intensive management plans would be developed, including interpretation of cultural values, according to availability of funding. Incompatible uses would be excluded within the river canyons. A "no surface occupancy" restriction would be applied to oil and gas leasing.

KEATING RIPARIAN RNA/ACEC: BLM lands on Balm, Clover, Sawmill and Sheep Creeks (3,120 acres), in the Keating Valley area, would be designated and managed as an ACEC to protect riparian values and wildlife habitat. A combination of 80 acres of Balm, Clover and Sawmill Creeks would be designated as an RNA to protect riparian zones for research and educational purposes. Incompatible uses in the RNA would be excluded, such as livestock grazing and commercial timber harvest. A withdrawal from mineral entry would be sought on 185 acres in the RNA. Riparian zones would be improved through intensive livestock grazing management or fencing to improve habitat suitable for the reintroduction of Columbian sharp-tailed grouse. A "no surface occupancy" restriction would be applied to oil and gas leasing.

POWDER RIVER CANYON: BLM lands in the Powder River Canyon (5,880 acres), between Thief Valley Reservoir and Highway 203 in the Keating Valley, would be designated and managed as an ACEC to protect raptor habitat, wildlife habitat and to maintain scenic qualities. The area would be managed to meet forage and habitat needs for big game, bald eagles and golden eagles as recommended by the Oregon Department of Fish and Wildlife, and consistent with legislated authority. Compatible recreation uses would be allowed. Incompatible uses within the canyon and adjacent

upland would be excluded. Good riparian conditions would be maintained by continuing intensive livestock management. A "no surface occupancy" restriction would be applied to oil and gas leasing.

UNITY RESERVOIR BALD EAGLE POTENTIAL NEST AREA: BLM lands on the North Fork of the Burnt River (360 acres), a potential bald eagle nest area, would be managed to protect habitat consistent with the Endangered Species Act and Pacific States Bald Eagle Recovery Plan. Under the Unity Reservoir Bald Eagle Management Plan, 200 of these acres would be designated and managed as an ACEC. The remaining 160 acres are under a Bureau of Reclamation project withdrawal for Unity Reservoir, and would be managed to protect bald eagle habitat. Incompatible uses would be excluded such as firewood cutting and major development actions. Commercial timber harvest would be excluded. Off-road vehicle use would be limited to designated roads and/or seasonal closure restrictions. No new roads would be developed. A "no surface occupancy" restriction would be applied to oil and gas exploration and development.

HAPLOPAPPUS RADIATUS: Population localities of Haplopappus radiatus (120 acres) would be maintained and protected consistent with the Endangered Species Act. One population area on BLM lands near Jordan Creek would be designated and managed as an ACEC to improve the plant's habitat. Incompatible uses would not be allowed. A "no surface occupancy" stipulation would be applied to oil and gas leasing.

HUNT MOUNTAIN: BLM lands on Hunt Mountain (2,230 acres) would be designated and managed as an ACEC to protect habitat for mountain goats and big game, and to protect habitat for sensitive plant species identified by the Oregon Natural Heritage Program. The existing exclusion of livestock grazing would be continued. Timber harvest would be limited to prescriptions that promote wildlife and sensitive plant habitat. Off-road vehicle use would be limited to designated roads and trails. A "no surface occupancy" restriction would be applied to oil and gas leasing.

OREGON TRAIL: Seven parcels of BLM lands with sites of the Oregon National Historic Trail (1,495 acres) would be designated and managed as an ACEC to preserve the unique cultural and visual qualities of these areas. Intensive management plans, including public information and interpretation, would be developed. New uses incompatible with maintaining cultural and visual qualities and providing public interpretation would be excluded in a 1/2 mile wide corridor. Legal access would be acquired. A withdrawal from mineral entry under the mining laws would be proposed on 147.5 acres of public land for trail sites at Flagstaff Hill, Straw Ranch and Echo Meadows. ORV use would be limited to existing roads and trails. A "no surface occupancy" restriction would be applied to oil and gas leasing.

LITTLE LOOKOUT MOUNTAIN: BLM lands on the south side of Little Lookout Mountain (3,220) would be designated and managed as an ACEC to establish habitat suitable for the re-introduction of Columbian sharp-tailed grouse. Riparian zones would be improved through intensive livestock management and fencing. A "no surface occupancy" restriction for oil and gas exploration would be applied.

BIG LOOKOUT MOUNTAIN ASPEN: Dispersed aspen communities (1500 acres) on Big Lookout Mountain would be designated and managed as an ACEC to protect and improve wildlife habitat, and establish study areas for research and educational purposes. Incompatible uses would be excluded.

SHEEP MOUNTAIN: BLM lands in the Sheep Mountain area (5398 acres, between Pine Creek and Oxbow Reservoir), including a portion of the Sheep Mountain WSA, would be designated and managed as an ACEC to protect outstanding scenic qualities, and wildlife and bald eagle habitat. Incompatible uses would be excluded, such as harvest of economically non-operable timber. A "no surface occupancy" restriction for oil and gas exploration and development would be applied on that portion not within the WSA boundaries. Lands would be acquired to benefit wildlife and bald eagle habitat.

HOMESTEAD: BLM lands on the Snake River Breaks near Homestead (8537 acres, between Pine Creek and Nelson Creek) would be designated and managed as an ACEC to protect outstanding scenic qualities, and wildlife, bald eagle and sensitive plant habitat. Incompatible uses would be excluded, such as harvest of economically non-operable timber. The area would be managed to meet forage and habitat requirements for game and non-game species, as recommended by the Oregon Department of Fish and Wildlife. A "no surface occupancy" restriction for oil and gas exploration and development would be applied on that portion not within WSA boundaries.

Preferred Alternative

Grazing Management

In the short term, grazing leases on Section 15 lands would continue to be issued at current levels, providing 4,258 AUMs. The level of grazing authorized on Section 15 lands would depend on

the other resources values identified for these lands, and on which lands are ultimately recommended for disposal or retention. (Refer to the Preferred Alternative for Land Tenure for more information on land retention and disposal).

The lessees could undertake range improvements consistent with BLM objectives and subject to specific approval by BLM. Range improvements would be periodically inspected for maintenance compliance.

Riparian

The 10 miles of uninventoried perennial riparian streams would be inventoried. Management programs for riparian zone recovery would be developed according to the following criteria:

1. Location, size and significance of a riparian zone relative to its watershed;
2. Current ecologic and scenic condition of a riparian zone relative to its potential;
3. Whether a riparian zone is perennial or intermittent;
4. Whether a riparian zone has potential for anadromous fish.

Recovery plans would put primary emphasis on state, federal and private cooperative efforts.

Wildlife Management

Wildlife habitat conditions would be maintained, or enhanced wherever opportunities are identified. The resource area would continue to work cooperatively with ODFW and WDG to help achieve regional big game population objectives.

Habitat manipulation would be undertaken wherever needed to increase habitat diversity and quality to maintain a wide variety of game and non-game wildlife species.

Inventories and monitoring would be increased as funding and manpower permits.

Exclosures would be maintained or enhanced. Additional exclosures would be built in high value wildlife areas if alternative management practices of other resources do not improve habitat conditions within a reasonable amount of time.

Fish habitat improvements would be concentrated on streams in poor to fair condition. The resource area would emphasize cooperative efforts with other management agencies especially to benefit anadromous fish habitat.

Habitat management plans would be developed for economically important wildlife, and threatened, endangered and sensitive species. Wildlife habitat objectives would continue to be included in all resource activity plans (such as allotment management plans , forest management plans and fire management plans).

Reintroduction and introduction of endemic wildlife and fisheries species would be pursued in suitable habitats on public lands, in cooperation with the Oregon Department of Fish and Wildlife and Washington Department of Game.

Threatened, Endangered and Sensitive Species Management

Locations where threatened, endangered, and sensitive (T&E) species occur would be avoided through site specific assessments and stipulations on proposed land disturbing activities. Inventories would be conducted for T&E species. The existing platforms for ferruginous hawks would be maintained and monitored. New platforms would be installed, contingent upon funding. Suitable habitat for Columbian sharp-tailed grouse would be inventoried and the species would be reintroduced in cooperation with ODFW.

The cooperative Bald Eagle Management Plan for Unity Reservoir Nesting Bald Eagles would be continued. Winter and spring inventories on bald eagles, Swainson's and ferruginous hawks would be continued.

Land Tenure and Realty Management

Lands in the planning area would be evaluated and placed in one of the the following land tenure classification zones. Details for land tenure adjustment are contained in Appendix I. Refer to Table 33 for the preliminary land tenure classifications by alternative and Map 7 for mapping of classification zones under the Preferred Alternative.

1) Lands in Zone 1 (retention) are those that best serve the management missions of BLM; including multiple use, management efficiency and public access to resources; or that have national, statewide or regional resource values. For example, lands that have significant values for threatened or endangered species, National Register cultural sites, wildlife habitat, riparian zones or mineral production would be placed in Zone 1. These lands would generally be retained in public ownership. Most ac-

quisition (primarily by exchange) would occur in this zone. No land sales would be permitted in this zone, however exchanges may be considered to acquire other Zone 1 lands that would enhance resource management programs or improve public service.

2) Lands in Zone 2 (unclassified) would include lands that have potential for retention or disposal but require additional resource inventories.

3) Lands in Zone 3 (disposal) would include lands that are inefficient to manage because of no or low resource values, size or isolation. These lands would be available for disposal pending site specific analysis. If site specific analysis determines that national, statewide or regional resource values exist, the land would be placed in Zone 1.

Legal access would be acquired primarily to benefit overall management and use of the resource. Access would be limited in areas where significant resource deterioration could result.

Major utilities would be encouraged to use existing corridors and sites. Sensitive resource values would be protected along corridors and sites, primarily through avoidance stipulations.

Use authorization including FLMPA Section 302 permit/leases would be permitted on a case by case basis.

Mineral Resource Management

Compliance inspections on all active mining exploration and develop would be increased to two or more per year, contingent on funding. Inspections of operations in areas with resource values that have mandatory protection, such as habitat for T&E species or National Register-eligible sites, would be given the highest priority. Inspections of operations in areas with resource values such as fragile riparian zones and watersheds would be given the next highest priority. Environmental review of plans of operation would emphasize protective stipulations for natural and cultural values.

Table 34 summarizes oil and gas leasing options under this alternative. About 75 percent of the Federal mineral estate managed by BLM would be open to leasing and development with standard stipulations (see Appendix G). Areas with critical wildlife habitat would be open for leasing with restrictive seasonal stipulations. Three of the SMAs that would be designated under this alternative would be open for leasing with a "no surface occupancy" stipulation.

Of the 14,825 acres closed to leasing, 13,857 are located within the three wilderness study areas in the planning area. If these acres are not designated as wilderness, they would be categorized as open for leasing with restrictive seasonal stipulations to protect wintering bald eagles.

Mineral material sales and free use permits would continue to be authorized from the existing community pit and other existing sites on a demand basis. In addition, as funds become available 24 potential community pit aggregate sites would be evaluated and production of mineral materials would be maximized consistent with demand and protection of other resource values.

Soils and Watershed Management

All proposed resource projects and surface disturbance would be reviewed to ensure that soils/watersheds are protected, rehabilitated or improved. Disturbance on fragile soils would be minimized.

The Morgan Creek Watershed Management Plan would continue to be implemented. Additional watershed plans would be developed and implemented in conjunction with other resource activity plans. Watershed concerns would be the central issue in areas with fragile soils.

Forest Management

The 10-year sustainable harvest level would be approximately 27 MMBF from a commercial forest land base of 21,439 acres (refer to Table 29).

Timber harvest would be excluded on approximately 673 acres of land recommended for Special Management Areas. Intensity of management for timber production would be adjusted on 3,914 acres to accommodate other significant resource values (e.g., clearcuts would be designed to maintain proper forage/cover ratios, and only light shelterwood cuts would be performed in scenic vistas or on critical watersheds). Other resource protection measures would be utilized according to specific site requirements.

About 190 acres would be partially cut and about 35 acres would be clearcut each year. An average of 1 to 4 miles of roads would be constructed annually. Road closures and construction standards would depend on site requirements and anticipated future use as determined by forest management activity plans.

Site-preparation, planting, and precommercial and commercial thinning would be conducted to maintain the allowable cut and benefit other resource values, particularly wildlife habitat and watershed. Refer to Table 30 for forest management treatment by alternatives.

About 4,000 acres of suitable woodlands would be excluded from harvest to protect mule deer winter range. The remaining 37,273 acres could be managed to produce an estimated sustainable 10-year harvest level of 9,800 cords of woodland products. However, demand sales of woodland products would be directed at areas where cutting would be of benefit to other resources.

Fire Management

Fires that threaten personal property, improvements, or would cause long term losses in resources would be suppressed as quickly as possible. A revised and comprehensive fire management plan would be prepared that emphasizes the use of prescribed burning and intensive management of unplanned ignitions to help meet ecosite and habitat objectives. The Forest Service/BLM cooperative Elkhorn Fire Management Plan for the Hunt Mountain area would continue to be implemented.

Rehabilitation guidelines would be included in the fire management plan. Specific rehabilitation plans would also be prepared on a case-by-case basis.

Cultural Resource Management

Twenty-eight sites that are potentially eligible for the National Register would be enhanced through intensive management, such as stabilization, investigation and interpretation. The Oregon Trail on BLM land would be monitored annually. Management plans would be developed to protect the Oregon Trail. Twelve sites and two potential districts would be evaluated for nomination to the National Register.

Paleontological Resource Management

Paleontological resources would be maintained and protected in review of individual surface disturbing proposals. In addition, known sites would be evaluated and monitored regularly, and potential sites would be inventoried. A regional data review and evaluation of paleontological resources would be completed. The Unity Paleontological Area has been identified for further study as a potential special management area.

Recreation Management

Cooperative management of the Grande Ronde River with the U.S. Forest Service would continue. BLM would take a more active role in managing public lands along the river from a few miles upstream of Wildcat Creek to the confluence of the Snake River. A river management plan would be prepared to enhance the river's natural and recreation values.

Facilities at the Flagstaff Hill segment of the Oregon National Historic Trail Special Recreation Management Area (SRMA) would be maintained. A management plan for this SRMA would be prepared to enhance visitor use of the site. The resource area would continue to work with local interest groups on Oregon Trail management.

Existing facilities on ERMAs would be redesigned to mitigate site overflow damage and sanitary problems associated with increased visitor use.

Where development is identified and funding is made available, additional facilities would be developed on sites that do not have significant conflicts with soil, watershed, riparian, aquatic or wildlife resources.

Off Road Vehicle Use

The ORV designations for Baker County would remain in effect. In addition, the proposed Joseph Creek ONA would be designated as closed/limited and the other eight proposed SMAs would be designated as limited for ORV use. Off road vehicle designations by alternative are displayed in Table 32 and shown on Map 5.

Special Management Areas

Under this alternative, 9 possible special management areas totaling 38,988 acres would be designated and managed as ACECs. Areas identified as needing additional study would be evaluated in cooperation with the Oregon Natural Heritage Program.

JOSEPH CREEK: Public lands on Joseph Creek (3,360 acres) would be designated and managed as an ONA/ACEC. Management objectives would be the same as under the Natural Environment Protection Alternative, except management plans would be developed to guide recreation use that would be compatible with the area's natural qualities.

GRANDE RONDE: BLM lands (9,715 acres) on the Grande Ronde River in Oregon and Washington, and on the Snake River in Washington, would be designated and managed as an ACEC. Management objectives would be the same as under the Natural Environment Protection Alternative; except incompatible uses would be excluded only within 1/4 mile of the river, and no plans would be developed to provide interpretation of cultural values. A recreation management plan would be developed to enhance natural and recreation values.

KEATING RIPARIAN: BLM lands on Balm, Clover, and Sawmill Creeks (2,173 acres) would be designated and managed as an ACEC, including 80 acres as an RNA. Management objectives for the RNA would be the same as under the Natural Environment Protection Alternative. Sheep Creek (947 acres) would not be managed or designated as part of the ACEC. Riparian habitat would be maintained through intensive livestock management.

POWDER RIVER CANYON: Public lands in the Powder River Canyon (5,880 acres) would be designated and managed as an ACEC. Management objectives would be the same as under the Natural Environment Protection Alternative.

UNITY RESERVOIR: BLM lands on the North Fork of the Burnt River (360 acres) would be managed to protect and preserve potential bald eagle nest habitat, with 200 acres managed and designated as an ACEC. Management objectives would be the same as under the Natural Environment Protection Alternative, except a seasonal restriction for oil and gas leasing would be applied.

HAPLOPAPPUS RADIATUS: Population localities of Haplopappus radiatus would be protected and maintained consistent with the Endangered Species Act. The population area on Jordan Creek would not be designated as an ACEC: however, studies would be implemented on known dispersed populations to evaluate the need for designation of a locality as a Research Natural Area.

HUNT MOUNTAIN: BLM lands on Hunt Mountain (2,230 acres) would be designated and managed as an ACEC. Management objectives would be the same as under the Natural Environment Protection Alternative, except a seasonal restriction for oil and gas leasing would be applied.

OREGON TRAIL: Seven parcels of BLM lands with Oregon Trail sites (1,495 acres) would be designated and managed as an ACEC. Management objectives would be the same as under the Natural Environment Protection Alternative; except oil and gas leases would be issued with standard stipulations, rather than a "no surface occupancy" restriction.

LITTLE LOOKOUT MOUNTAIN: BLM lands on Little Lookout Mountain would not be designated. Management objectives would be to maintain current natural vegetation diversity and to maintain or improve riparian vegetation by intensive livestock management.

BIG LOOKOUT MOUNTAIN ASPEN: Dispersed aspen communities would not be designated. Management objectives would be the same as under the Current Management Alternative.

SHEEP MOUNTAIN: BLM lands in the Sheep Mountain area (5398 acres) would be designated and managed as an ACEC. Management objectives would be the same as under the Natural Environment Protection Alternative; except a seasonal restriction for oil and gas leases would be applied on that portion outside WSA boundaries; and lands would only be acquired to benefit bald eagle habitat.

HOMESTEAD: BLM lands near Homestead (8537 acres) would be designated and managed as an ACEC. Management objectives would be the same as under the Natural Environment Protection Alternative; except, a seasonal restriction for oil and gas leases would be applied on that portion outside WSA boundaries.

Chapter 4
Environmental Consequences

Environmental Consequences

Introduction

This chapter describes the environmental consequences that would result from implementing each of the alternatives. The alternatives are descriptions of management emphasis, and primarily direct future site-specific and activity-specific decision making in the Baker Resource Area. The environmental consequences of the alternatives are identified in comparative, general terms, and in most cases subsequent site-specific environmental analysis will be required to implement decisions made in this plan.

Analysis indicated that no impacts of regional significance would result from implementing any of the alternatives. The environmental consequences are significant to the immediate area of implementation, but not to the entire region or beyond. Also, analysis indicated that there would be no significant impactc upon topography, energy use, paleontological resources, municipal waterwheds, groundwater, floodplains, noise or demographics. These subjects will not be analyzed further.

Land tenure adjustment would not result in significant impacts on any resource under any of the alternatives.

General Methodology

Methods used to analyze impacts are described by Haug 1984 and Haug et al. 1984. The methodology results in a systematic and objective analysis that identifies the suspected causes of environmental impacts. Land management actions that cause changes are called change agents. Change agents produce environmental impacts, which are changes in certain resource values known as indicators. Environmental impacts are described in terms of increases or decreases of certain units of measurement for an indicator.

The nature and extent of impacts are defined as follows:

IMPACT: Impact is defined as a spatial or temporal change in the human environment caused by man. The change should be (1) perceptible, (2) measurable, and (3) relatable to a land management action or alternative.

SHORT-TERM: Short-term is defined as the 10-year period expected for implementation of the Resource Management Plan and associated activity plans, such as Allotment Management Plans, Timber Management Plans and Habitat Management Plans.

LONG-TERM: Long-term is defined as beyond this 10 year period.

Not all impacts were quantifiable because of the lack of quantifiable data. An interdisciplinary team of resource specialists used professional judgement to estimate environmental consequences where specific data was lacking.

Assumptions for Analysis

To assess environmental consequences of the land use alternatives, certain assumptions were made about how the permitted activities are being or would be carried out. These assumptions are:

1. Applicable laws and their implementing regulations and Executive Orders are committed mitigation.

2. The Standard Design Features in Appendix G and Management Common to All Alternatives (Chapter 3) are committed mitigation.

3. Monitoring studies would be completed as indicated and adjustments or revisions would be made where objectives are not being met.

4. Appropriate maintenance would be carried out to maintain all resource improvement projects.

5. BLM does not have authority to fully mitigate impacts in some areas, or that are caused by certain activities. For example, in areas where scattered BLM land parcels occur, BLM must rely on cooperative management agreements to mitigate watershed or wildlife impacts. Also, BLM's capability to fully mitigate impacts is limited under the 43 CFR 3809 regulations regarding mineral exploration and development.

Impacts to Soils

Grazing livestock affect soil resources primarily by removing protective plant materials and compacting the soil surface. These actions tend to reduce soil infiltration rates and increase surface runoff (Leithead 1959; Rauzi and Hanson 1966). The result is greater surface soil losses during major precipitation events.

Over the long-term, continued surface soil loss and compaction would reduce soil productivity.

Under the No Action Alternative there would be no change in the amount of livestock grazing or the impact of livestock grazing on soil resources. Under the Commodity Production Alternative there would be increased impacts to soils brought about by authorizing livestock grazing on presently unleased tracts. Impacts to soils would decrease slightly under the Environmental Protection and Preferred Alternatives, due to grazing restrictions or exclusions in SMAs and certain riparian zones. The difference in impacts between the alternatives is very small. Refer to Table 35 for a summary of impacts to soils by alternative.

The major impacts of timber management on soils would be compaction, slope failure and topsoil displacement resulting from road construction and timber harvesting operations (Table 35).

Soil compaction during logging operations is caused primarily by yarding operations. Tractor yarding causes greater compaction than cable yarding. Increased soil compaction results in increased rilling and gullying, and reduced infiltration rates and soil productivity. These effects may be long term.

Road construction causes the greatest soil displacement and loss in productivity of any timber management activity. Soil excavation alters drainage patterns and exposes soil to wind and water erosion. A roadcut at a critical point on a steep slope can trigger slope failure. Road fills put additional weight on the underlying soil mass, and can trigger landslides on steep slopes.

Impacts on soils from road construction and tractor logging would be unavoidable under all alternatives, but would be in proportion to the number of acres harvested and logging practices employed. Approximately 5 to 15 percent of the acres harvested would be affected by yarding and road construction. Impacts would be greatest under the Commodity Production Alternative, slightly less under the Preferred and No Action Alternatives, and least under the Natural Environment Protection Alternative.

The greatest impacts to soils from recreation activities come from ORV use. The major impacts are caused by surface disturbance and soil compaction, which result in increased soil erosion and reduced productivity. Under the No Action and Commodity Production Alternatives, ORV use would not be further curtailed and present levels of impacts would be expected to continue. Under the Natural Environment Protection and Preferred Alternatives the impacts would be slightly less because additional areas would be closed or limited to ORV use.

Impacts from mineral exploration and development would occur mainly from road construction and other related surface disturbing activities, such as construction of drilling pads and excavation associated with placer mining. Under all the alternatives, these activities would reduce soil productivity in localized areas. Historical use indicates that an average of 50-100 acres per year could be expected to be disturbed in this manner.

Table 35 Summary of environmental Consequences, Soil and Water Resources

	No Action Alternative		Commodity Production Alternative		Natural Environment Protection Alternative		Preferred Alternative	
	Soil	Water	Soil	Water	Soil	Water	Soil	Water
Livestock Grazing								
1. Grazing Pressure	0	0	-	-	+	+	+	+
Wildlife Habitat								
1. Prescribed Burning	+	+	0	0	+	+	+	+
2. Interseeding	0	0	-	-	+	+	+	+
3. Stream Projects	0	0	+	+	+	+	+	+
Riparian Zones								
1. Fencing	+	+	0	0	+	+	+	±
Recreation								
1. Day Use	-	-	-	-	+	+	+	+
2. Camping	-	-	-	-	+	+	+	+
3. ORV	0	0	-	-	+	+	+	+
Mineral Exploration and Development								
1. Road Construction	-	-	-	-	+	+	+	+
2. Exploration and Extraction	-	-	-	-	+	+	+	+
3. Occupancy	-	-	-	-	+	+	+	+
Forestry								
1. Road Construction	-	-	-	-	0	0	0	0
2. Timber Harvest	-	-	-	-	0	0	-	-
3. Site Preparation	0	0	-	-	0	0	0	0
4. Reforestation	0	0	0	0	+	+	+	+
5. Thinning	0	0	+	+	0	0	0	0

\+ = Improvement in watershed conditions through less erosion and increased water quality
\- = Decline in watershed conditions thru more erosion and decreased water quality
0 = No Change

Soil productivity would be slightly reduced due to localized surface disturbance under all alternatives. Over the long term, the greatest reduction in soil productivity would occur under the Commodity Production and No Action Alternatives. A slight increase in long term productivity would occur under the Natural Environment Protection and Preferred Alternatives.

Impacts to Air Quality

Smoke from the prescribed burning of slash and prescribed burns to improve wildlife habitat would affect air quality under all alternatives. Smoke from slash burning is more significant than prescribed burning, but both can be mitigated by confining burning to periods when atmospheric conditions cause rapid smoke dispersal and fuels are at optimum moisture content. In general, smoke will be created in proportion to the amount fo slash remaining from timber harvest and acreage of prescibed burns conducted in the planning area.

Smoke due to slash burning and prescribed burning would be greatest under the Natural Enviromment Protection Alternative (see Table 36). Less smoke would be produced under the Preferred Alternative and the least amount would be produced under the Commodity Production Alternative.

Table 36 Impacts to Air Quality from Average Annual Slashburning and Prescribed Burning in the Planning Area

	No Action		Commodity Production		Natural Environment Protection		Preferred	
	Acres	Tons/Fuel	Acres	Tons/Fuel	Acres	Tons/Fuel	Acres	Tons/Fuel
Slashburning (11.5 tons/acre)	186	2,139	193	2,220	153	1,760	177	2,036
Prescribed Burning (3.5 tons/acre)	200	700	100	350	800	2,800	500	1,750
Total Tons of Fuel		2,839		2,570		4,560		3,786

Timber harvest from BLM lands in the planning area is less than 1 percent of all other sources combined. With appropriate mitigation measures, it is doubtful that the differences between the alternatives would be noticeable during most years.

Impacts to Water

Impacts to water would be primarily on water quality, and to a lesser extent on seasonal stream flows. Refer to Table 35 for a summary of impacts to water by alternative.

Where livestock grazing occurs in stream or riparian areas, there would be reduced water quality caused by increased soil erosion and coliform bacteria. The reduction or removal of stream bank vegetation by cattle can substantially increase water temperature (Claire and Storch 1977; Brown and Krygier 1967). Sloughing and collapse of stream banks can increase suspended sediments in streams and can be an indirect result of livestock grazing (Platts 1981).

Water quality would decrease under the Commodity Production Alternative due to increased authorized livestock grazing. Under the No Action Alternative, there would be very little change in water quality. Under the Preferred Alternative there would be a slight increase in water quality, brought about by protective measures to SMAs. The Natural Environment Protection Alternative would result in a greater increase in water quality, because it provides the most protection to SMAs and riparian zones.

Improving the condition of stream riparian areas by restricting cattle grazing can result in a "sponge" effect that enables riparian vegetation to absorb spring runoff and release more water to streams in the summer, increasing the length of time that a stream will flow (Winegar, 1980). Under the Natural Environment Protection and Preferred Alternatives stream flows would be expected to increase in riparian areas protected from livestock grazing. Stream flow would not increase under the No Action and Commodity Production Alternatives.

The major forest management activities that impact water resources are road construction and timber harvesting. The type of yarding system used and the timing of timber harvest also influence sediment concentrations in nearby streams.

Road construction generally far exceeds logging as a cause of increased sediment loads in stream systems. Researchers report that road construction can increase sediment loads as much as 250 to 350 times those of undisturbed forest watersheds. After construction, sediment originating from the barren road surfaces can contribute to high suspended sediment loads for more than five years (Megahan and Kidd 1972).

Localized short-term increases in suspended sediment loads could be unavoidable from road construction and tractor logging under all alternatives. Impacts would be in proportion to the acres of timber harvested and miles of road constructed. Impacts would be least under the Natural Environment Protection Alternative and greater under the other alternatives. There would be no substantial difference in impacts between the other three alternatives.

ORV use decreases water quality primarily through soil compaction or displacement and removal of surface vegetation. More areas would be closed or limited to ORV use under the Preferred and Natural Environment Protection Alternatives, which would result in an increase in water quality. Under the Commodity and No Action Alternatives no additional areas would be restricted to ORVs and water quality would not increase.

Impacts on water quality from mineral exploration or development would be mainly from short-term but severe increases in sediment loads caused by road construction and other related surface disturbing activities. Under the No Action and Commodity

Production Alternatives, impacts from mining would remain at about current levels. Impacts would decrease slightly under the Natural Environment Protection and Preferred Alternatives if funding is available to increase monitoring levels as proposed.

In the short term, water quality would be slightly reduced under all alternatives due to localized disturbances. These impacts would be least under the Environmental Protection Alternative and greatest under the Commodity Production Alternative. Over the long term a slight increase would be expected in overall water quality under the Natural Environment Protection and Preferred Alternatives.

No impacts are anticipated to regional groundwater aquifers. Although there is no potential for significantly increased water yield, improved watershed conditions would occur under the Natural Resource Protection and Preferred Alternatives.

Impacts to Vegetation

Impacts to Rangeland Vegetation

The differences in impacts to rangeland vegetation from grazing management are generally slight and site-specific. Under the No Action Alternative no change in grazing management or ecosite condition would occur. Under the Commodity Production Alternative a decline in ecosite condition would be expected from livestock grazing on previously unleased tracts. Under the Preferred and Natural Environment Protection Alternatives improvement to the vegetation along segments of streams would occur as a result of grazing restrictions in SMAs and riparian zones.

Under all alternatives continued ORV use would decrease vegetation and lower succession to the pioneer stage, and over the long term would create an almost permanent bare ground condition in the heaviest use areas. Concentrated recreation use and surface mining activities would cause about the same effects, except on a more limited and localized scale. These impacts would be greatest under the No Action Alternative, because it does not provide for new or expanded recreation facilities and sites. Because of increased recreation facilities, impacts would be less under the Commodity Production and Preferred Alternatives, and would be least under the Natural Environment Protection Alternative. If funding for recreation management does not keep pace with anticipated recreational needs, localized impacts would remain at about the same level under all alternatives.

Interseeding rangelands with a mixture of native grasses, forbs and shrubs to improve wildlife habitat under the Natural Environment Protection and Preferred Alternatives would increase habitat diversity and the ecological condition of rangelands. Reseeding the above mixtures on wildfire and prescribed fire areas would increase vegetative diversity and vigor under all alternatives..

Overall, under the No Action and Preferred Alternatives rangeland vegetation diversity, ecological condition and vigor would remain unchanged for the majority of the area. Under the Commodity Production Alternative a decline in diversity would be expected. An increase in diversity would be expected under the Natural Environment Protection Alternative.

Impacts to Forest Vegetation

Timber harvest would alter plant succession and increase the vigor and variety of forest vegetation. This effect would be greatest under the Commodity Production Alternative and least under the Natural Environment Protection Alternative.

Long-term losses in vegetation associated with the construction of permanent roads would occur primarily under the Commodity Production Alternative, while the other alternatives would emphasize temporary roads with shorter term impacts. Old-growth stands would be reduced under all alternatives, but to a greater degree under the Commodity Production and No Action Alternatives and to a lesser degree under the Preferred Alternative. The reduction in old-growth stands would be very small under the Natural Environment Protection Alternative. Under all alternatives harvesting of trees infected with disease or insects would reduce the chances for infection spreading to nearby trees or stands of trees.

Thinning of trees would increase the diversity and vigor of understory vegetation because of increases in light, moisture and nutrients. Remaining trees would increase in vigor, become more resistant to insects and disease, and grow faster. Some thinning would occur under all alternatives, however the greatest amount of thinning on a consistent annual basis is proposed under the Commodity Production Alternative.

Prescribed burning of understory vegetation would decrease insect and disease problems of tree species, which would increase diversity of understory vegetation in the short term, increase vigor of remaining trees, and decrease fire sensitive tree species. Planned burning of early aged forest vegetation would increase diversity in the short term and decrease diversity in the long term. It

would also increase vigor of species not readily susceptible to fire. Prescribed fire is proposed under all alternatives. Acres treated with fire would range from approximately 190 per year under the Commodity Production Alternative to about 150 per year under the Natural Environment Protection Alternative.

Forest production would also be affected by the affects of livestock grazing on soil productivity and damage to reproduction by grazing animals. The effect of grazing would increase under the Commodity Production Alternative and would not change under the other three alternatives. Refer to Table 30 for Forest Management Treatment by Alternative.

Forest vegetation would be affected by timber harvest and management under all alternatives. The affects would be the greatest under the Commodity Production Alternative and the least under the Natural Environment Protection Alternative.

Impacts to Riparian Vegetation

Fencing of riparian zones to exclude livestock grazing would increase the diversity and vigor of riparian vegetation. Over the long term, vegetation in the riparian zones would move towards climax. Shrubs and trees would especially increase. These impacts would generally occur, but more slowly, by restricting livestock grazing in riparian zones through intensive management.

The present riparian vegetative diversity, vigor and trend would continue under the No Action Alternative, and would decline slightly under the Commodity Production Alternative. Fencing and intensive management of livestock grazing would increase riparian vegetation diversity, vigor and trend to the greatest degree under the Natural Environment Protection Alternative, and to a lesser degree under the Preferred Alternative.

Road construction, timber harvest, mining and concentrated recreation in riparian zones would reduce vegetation in proportion to the amount of area used. Impacts would be greatest under the Commodity Production Alternative and smallest under the Environmental Protection Alternative, but would not vary substantially under any alternative.

Designation of the Joseph Creek, Keating Valley Riparian, and Grande Ronde River as SMAs under the Natural Environment Protection and Preferred Alternatives would increase management intensity, restrict livestock grazing and other vegetation disturbing activities, and thus increase the quality of riparian vegetation on these areas.

Overall, present trends in riparian vegetation would not change under the No Action Alternative, would decrease slightly under the Commodity Production Alternative, and would increase substantially under the Natural Environment Protection Alternative and Preferred Alternatives.

Impacts to Threatened, Endangered or Sensitive Plants

Unidentified populations of state or federally listed plant species in previously undisturbed areas could be suseptible to disturbance. Because information is lacking about the response to grazing, the impact of proposed changes in grazing management cannot be predicted. Impacts due to vegetation manipulation, range impovement construction and timber management activities could reduce unidentified popoulations of endangered, threatened or sensitive species. Therefore, intensive plant inventories of the project areas would be conducted, and the projects would be modified, if necessary, to protect endangered, threatened or sensitive species.

Because the current inventory of threatened, endangered or sensitive plants is far from complete, the changes in impacts between alternatives can not be adequately analyzed. The slight increase in surface disturbing activities under the Commodity Production Alternative could impact unknown and undetected occurrences of these species. Protection provided under the Natural Environment Protection Alternative would tend to reduce any such impacts.

The only known federal candidate plant in the area (Haplopappus radiatus) would be provided additional protection under the Natural Environment Protection Alternatives above that provided by the Endangered Species Act, funding permitting. Under the other three alternatives this additional protection would not occur.

Impacts to Wildlife

Planned burning, seeding with a mixture of grasses, forbs and shrub species, including interseeding in existing single species stands, would increase wildlife forage and habitat quality. These actions would occur to the greatest degree under the Preferred and Natural Environment Protection Alternatives, and would occur only incidentally under the No Action and Commodity Production Alternatives.

Wildlife forage and cover would be increased under the Natural Environment Protection and Preferred Alternatives. Under the Commodity Production Alternative, authorizing livestock use on previously

unleased tracts would decrease the amount of forage and cover available for wildlife. There would be no change in these values under the No Action Alternative.

Forest practices can increase wildlife habitat diversity by creating forest openings and edge, and by improving the distribution of tree sizes and ages. However, forest practices also reduce the vertical structure of the forest, change plant composition, reduce acreage of vegetation (through construction of permanent roads), and eliminate old growth stands. These changes decrease hiding and thermal cover; reduce the effectiveness of roadside cover for protection against human harassment; decrease nesting and forage sites for cavity dwellers, particularly old growth dependent species; and decrease the available niches for forest-dependent birds. Wildlife populations would be reduced and a certain number of animals and birds displaced.

These impacts would occur in proportion to the amount of timber harvest, road construction and other forest practices proposed under each alternative (refer to Table 29). The greatest change would occur under the Commodity Production Alternative and the least change would occur under the Environmental Protection Alternative. Overall, forest practices would impact from 7 to 10 percent of the BLM forest land in the planning area during the 10 year horizon of this plan.

Impacts to Fish Habitat

Under the Preferred Alternative, cooperative agreements that are necessary to implement effective improvement of anadromous and resident fish habitat would be sought with private landowners, and state and other federal agencies. Instream improvements such as rock and log gabions, and riparian fencing and shrub plantings, would increase the quality of fish habitat, and ultimately fish populations. Instream and riparian improvements would be built to the greatest extent in the Preferred and Natural Environment Protection Alternatives, and to the least extent in the Commodity Production and No Action Alternatives.

Forestry management activities, such as road construction and timber harvest, would increase stream siltation and produce localized, but extremely small effects on fish habitat. Impacts would be greatest under the Commodity Production and No Action Alternatives.

Mineral exploration and development, especially from gold mining, would degrade streams and reduce fish habitat and populations under all alternatives. The greatest impacts would result under the Commodity Production and No Action Alternatives. Impacts from mining would be least under the Preferred and Natural Environment Protection Alternatives because of increased monitoring, providing funding is available.

Impacts to Threatened, Endangered or Sensitive Animal Species

SMA designation under the Natural Environment Protection and Preferred Alternatives would increase the amount of protection for bald eagles. There are no actions proposed under the No Action or Commodity Protection Alternatives that would affect threatened, endangered or sensitive animal species.

Summary of Impacts to Wildlife and Fish

Overall, wildlife populations would increase due to improvement in habitat diversity and quality under the Preferred and Natural Environment Protection Alternatives. There would be little change under the No Action Alternative and a slight decrease in population numbers, except threatened and endangered species, under the Commodity Production Alternative.

Impacts to Recreation

The development of additional facilities in Extensive Recreation Management Areas (ERMAs) would improve recreation opportunities and decrease degradation of these areas. The greatest decrease in site degradation would occur under the Preferred and Commodity Production Alternatives.

Dispersed recreation opportunities would be reduced in forested areas in the short term by timber management activities. Impacts would be slightly greater under the Preferred Alternative and least under the Environment Protection Alternative. The difference between any of the alternatives would be slight.

A slight increase in access to public land through timber sale road construction would occur under all alternatives, but would be slightly greater under the No Action and Commodity Production Alternatives. Under the Natural Protection and Preferred Alternatives there would be fewer roads constructed, and fewer left open to public use following timber harvest.

Mineral exploration and development activities would reduce recreational opportunities throughout the planning area, but especially in riparian zones.

Reductions would be greatest under the Commodity Production Alternative and least under Environment Protection Alternative.

Fishing and hunting opportunities would not increase above current levels under the No Action and the Commodity Production Alternatives, because no significant habitat improvement would be made. However, habitat improvements, and related increases in fish and wildlife populations, would increase fishing and hunting opportunities under the Preferred and Natural Environment Protection Alternatives.

Designation of SMAs would have little effect on dispersed recreation within the designated areas. However, ORV use would be restricted in these areas, and ORV restrictions would increase under the Commodity, Natural Environment Protection and Preferred Alternatives (see Table 37). ORV designations would not change under the No Action Alternative. Additional ORV limitations would be greatest due to SMA designations under the Natural Environment Protection and Preferred Alternatives, and would be least under the Commodity Production Alternative.

Impacts to Visual Resources

Under all alternatives, impacts of proposed surface disturbing such as range improvements, forest management practices, expanded use of existing utility corridors and road construction activities would be analyzed on a site-specific basis. Activities having impacts would be permitted in areas of high visual quality only if long term effects were mitigated.

Under the Preferred and Commodity Alternatives some increase in visual quality can be expected due to management designed to protect the quality of recreation sites and accommodate increased visitor use. Designation of SMAs and protection of riparian zones would improve visual quality in specific areas under the Natural Environment Protection and Preferred Alternatives.

Forest management activities would decrease visual quality under all alternatives. Most impacts would be short term, with roads being the primary impacts.

Exploration and development of minerals would decrease localized visual quality under all alternatives in the short term, however some effects would be long term or until reclamation is completed.

Visual quality would continue to decline under all alternatives in intensively used ORV areas such as Virtue Flats. The overall quality rating of the area, however, would not change to another visual quality class.

Table 37 Impacts from Special Management Areas on ORV Designation

	No Action Alternative			Commodity Alternative			NATURAL PROTECTION Alternative			PREFERRED Alternative		
SMA Areas	Limited	Closed	Open	Limited	Closed	Open	Limited	Closed	Open	Limited	Closed	Open
Hunt Mtn ACEC	-	0	2230	-	-	2230	2230	-	0	2230	-	-
Unity Res. Bald Eagle ACEC	360	0	-	360	-	-	360	-	0	360	-	-
Keating Riparian RNA/ACEC	-	0	3120	-	-	3120	3120	-	0	3120	-	-
Powder River Canyon ACEC	5880	0	-	5880	-	0	5880	-	0	5880	-	-
Big Lookout Mtn ACEC	1500	0	-	1500	-	0	1500	-	0	1500	-	-
Joseph Crk ONA/ACEC	-	0	-	3210	150	0	3210	150	0	3120	150	0
Grande Ronde ACEC	-	0	-	-	-	9715	9715	-	0	9715	-	0
Oregon Trail ACEC	-	0	1495	-	-	1495	1495	0	0	1495	0	0
Sheep Mtn ACEC	5398	0	-	5398	-	0	5398	0	0	5398	0	0
Homestead ACEC	8537	0	-	8537	-	0	8537	0	0	8537	0	0
Happlopappus ACEC	120	0	-	120	-	0	120	0	0	120	0	0
Little Lookout Mtn	-	0	3220	-	-	3220	3220	0	0	0	0	3220
Total Acreages	21,795	0	10,065	25,005	150	19,780	44,785	150	0	41,565	150	3220

Prescribed fire and wildfire would result in short term decline in visual quality. Surface disturbing fire suppression activities would also decrease visual quality under all alternatives in the short term. These impacts would be minor and would not differ greatly among the alternatives.

No overall change in existing visual resource classes would occur under any alternative. Slight and very localized short term reductions in visual quality would result from some surface disturbing activities.

Impacts to Cultural Resources

In accordance with the National Historic Preservation Act of 1966, as amended, Executive Order 11593, and Bureau policy, appropriate measure would be taken to identify and protect cultural sites prior to ground disturbing activities, and to identify and evaluate effects on cultural sites in advance of title relinquishment actions. These regulations, policies, and legislation are common to all alternatives and apply to all cultural resources. As a result of this guidance, the effects of activities that would normally reduce cultural resource values would be mitigated.

Some of the activities involved in the implementation of various management programs could affect cultural resource values. Under the Commodity Production Alternative, vandalism and natural deterioration of cultural properties would increase as a result of dispersed recreation and ORV use, and would be mitigated according to the availability of funding. Under the Commodity Production and No Action Alternatives, no other impacts are expected to result in the loss of cultural resource values of known significance.

Under the Preferred and Natural Environment Protection Alternatives, increased monitoring and ORV restrictions would provide greater protection for cultural properties, and intensive cultural resource management programs including stabilization and investigations) would provide long term enhancement of important cultural resources, particularly the Oregon Trail.

Impacts to Production of Mineral Resources

Locatable Minerals

Increased monitoring under the Preferred and Natural Environment Protection Alternatives could result in increased corrective mitigation being required, which could cause marginal operations that are unable to comply to cease or delay production.

Designation of SMAs and related BLM proposals for withdrawal from mineral entry or restriction could reduce the area available for mineral resource development (see Table 38). Under the Natural Environment Protection Alternative approximately 1,680 acres would be proposed by BLM for withdrawal. These acres include three portions of the Keating RNA/ACEC (185) acres and the entire Oregon Trail ACEC (1495 Acres). Under the Preferred Alternative approximately 332 acres would be proposed for withdrawal. These acres include three portions of the Keating RNA/ACEC (185 acres) and three segments of the Oregon Trail ACEC (147 acres). Refer to Table 26.

Investments in existing claims on the Clover Creek and Balm Creek parts of the Keating Riparian RNA/ACEC, and the Flagstaff Hill segment of the Oregon Trail ACEC, could be lost if valid locatable minerals are not discovered prior to withdrawal of these areas.

Leasables Minerals

Stipulations on oil and gas leasing would occur under all alternatives (see Tables 34 and 37). The least affect on leasable minerals would be under the No Action Alternative, where no SMAs would be designated. The Commodity Production Alternative would have only slightly greater impact. The greatest impact would occur under the Natural Environment Protection Alternative, with 12 proposals for SMAs, and slightly less under the Preferred Alternative, with 9 proposals for SMAs.

Summary of Impacts to Mineral Resources

On an overall basis the greatest impact to mineral resources would occur under the Natural Environment Protection Alternative, which proposes increased monitoring and the largest areas for mineral withdrawal and restriction. Less impact would occur under the Preferred Alternative. There would be no change to mineral resources under the No Action Alternative, and little change under the Commodity Production Alternative.

Impacts to Special Management Areas

Impacts to special or unique values in the 12 possible special management areas vary by alternative,

Table 38 Impacts from Special Management Areas on Mineral Resource Development

SMA Areas	SMA Total Acres	Commodity Production Proposed Acres of No Surface Occupancy	Commodity Production Proposed Acres of Withdrawal	Natural Environment Protection Alternative Proposed Acres of No Surface Occupancy	Natural Environment Protection Alternative Proposed Acres of Withdrawal	Preferred Alternative Proposed Acres of No Surface Occupancy	Preferred Alternative Proposed Acres of Withdrawal
Hunt Mtn ACEC	2230	-	-	2230	-	-	-
Unity Res. Bald Eagle ACEC	200	-	-	200			-
Keating Riparian RNA/ACEC:	3120[1]		-	3120[1]	185[1]		185[1]
Balm Cr RNA/ACEC	1073	-	-	-	75		75
Sheep Cr ACEC	947	-	-	-	-	-	
Sawmill Cr RNA/ACEC	420	-	-	-	80	-	80
Clover Cr RNA/ACEC	680	-	-	-	30	-	30
Powder River Canyon ACEC	5880	-	-	5880	-	5880	-
Big Lookout Mtn ACEC	1500	-	-	1500	-	-	-
Joseph Cr ACEC	3360	3360	-	3360		3360	-
Grande Ronde ACEC	9715	-	-	9715	-	9715	-
Oregon Trail ACEC	1495	-	-	1495	1495	-	147.5
Sheep Mtn ACEC	5398	-	-	279[2]	-	-	-
Homestead ACEC	8537	-	-	3389[2]		-	-
Haplopappus ACEC	120		-	120			-
Little Lookout Mtn ACEC	3220	-	-	3220	-	-	-
Total Proposed Acres of NSO or Withdrawal by Alternative		3360	0	34,508	1,680	18,955	332.5

[1]This acreage represents a total of the acreages shown below for the four subareas.

[2]These acreages represent the acres of ACEC not within WSAs.

as described in Table 39. Values protected by existing legislation and authorities, such as T&E species and National Register-eligible cultural properties, are uniformly protected and maintained under all alternatives. Other special values in SMAs, such as visually sensitive areas, wildlife habitat and riparian zones, would be impacted differently by alternative.

The Commodity Production and No Action Alternatives would have adverse impacts in SMAs to visual quality, wildlife habitat, and natural vegetation associations due to disturbance from mineral exploration and development, unrestricted ORV use in sensitive areas, dispersed recreation use, timber harvest and livestock grazing. Under these alternatives, a short term decline in sensitive visual values could occur within the Oregon Trail corridor due to surface disturbance from mineral development and ORV use. Disturbance associated with mineral exploration and development and timber harvest would degrade riparian zones in the Keating area.

The Preferred and Natural Environment Protection Alternatives provide the most comprehensive resource protection, including enhancement of special management area values and proposed withdrawal of lands from mineral entry. Under these alternatives, management as ACECs and restrictions on uses would provide greater protection for visual and natural system values, including the Oregon Trail corridor and Keating Riparian area.

Under the Natural Environment Protection Alternative, 12 SMAs with potential for mineral development would be protected by a "no surface occupancy" restriction on mineral leases. Three SMAs would be protected by a "no surface occupancy" stipulation under the Preferred Alternative. Standard stipulations and seasonal restrictions would be applied to protect these values

Table 39 Impacts to Special or Unique Resource Values by Alternative *

Possible Special Management Areas	No Action	Commodity Production	Natural Protection	Preferred
Joseph Creek	-1	0	+2	+1
Grande Ronde	0	-1	+2	+1
Keating Riparian	-1	-1	+1	0
Powder River Canyon	0	-1	+1	+1
Unity Reservoir Eagle Habitat	0	0	+2	+1
Haplopappus Area	0	0	+1	0
Hunt Mountain	0	0	+1	+1
Oregon Trail	-1	-1	+1	0
Little Lookout	0	0	+1	0
Big Lookout	+1	-1	+1	+1
Sheep Mountain	0	0	+1	+1
Homestead	0	0	+1	+1
Overall Impacts	-1	-1	+1	+1

*Impacts of livestock grazing, timber management, wildlife habitat management, riparian management, recreation, ORV use, and minerals exploration and development were evaluated jointly against the protection provided under the various proposals to arrive at individual and average ratings.

\+ = Improvement
\- = Decline
0 = Maintain current

1 = Low or Slight
2 = Moderate

Table 40 Effects on Local Personal Income and Employment[1]

Activity	Commodity Production Alternative Change in Personal Income ($)	Commodity Production Alternative Change in No. Jobs	Natural Environment Protection Change in Personal Income ($)	Natural Environment Protection Change in No. Jobs	Preferred Alternative Change in Personal Income ($)	Preferred Alternative Change in No. Jobs	No Action Alternative Change in Personal Income ($)	No Action Alternative Change in No. Jobs
Livestock Grazing	+11,000	[2]	420	[2]	0	0	0	0
Timber Harvest	+41,000	+2	-102,000	-4	-20,000	-1	0	0
Total	+52,000	+2	-102,420	-4	- 20,000	-1	0	0

[1]Presented in 1982 dollars.
[2]Less than 1

under other alternatives.

Impacts to Economic Conditions

Economic impacts for each alternative are estimated from changes in livestock grazing and timber harvest, and are expressed as local personal income and employment changes from the present situation. Changes in recreation activities and mineral exploration and development have not been quantified.

Use of public land forage would increase by 764 AUMs under the Commodity Production Alternative. It would decrease by 30 AUMs under the Natural Environment Protection Alternative and would remain at the existing level under the Preferred and No Action Alternatives. It is estimated that rancher dependence on public land would be only slightly effected under the Commodity Production and Natural Environment Protection Alternatives. The effects of the Commodity Production and Natural Environment Protection Alternatives on personal income and employment are shown in Table 40. The

changes in local personal income and jobs were estimated from changes in livestock sales, which were assumed to vary proportionately with changes in AUMs. These changes may be overestimated if the lessees in the planning area are not able to utilize the forage on public lands during the period it is offered.

Effects of changes in the average annual timber sales volume on local personal income and employment are shown for each alternative in Table 40. In determining the effect of changes in timber harvest, the average annual sales volume for each alternative was subtracted from the average annual sustainable harvest level.

Under the Commodity Production Alternative, personal income would increase by $56,000 (in 1982 dollars) and employment would increase by approximately three jobs. These increases amount to less than one percent of the 1982 personal income and employment in the region.

Under the Natural Environment Protection Alternative personal income would decrease by approximately $102,000 and employment by four jobs. Under the Preferred Alternative the losses in personal income and employment would amount to approximately $20,000 and one job. Changes under either alternative would amount to less than one percent of the 1982 personal income and employment.

Local personal income and employment would not change under the No Action Alternative.

Chapter 5
Consultation and Distribution

The Baker RMP/EIS was prepared by an interdisciplinary team of specialists from the Baker Resource Area and Vale BLM District Offices. Writing of the RMP/EIS began in January 1985. The RMP/EIS process included public participation, interagency coordination, and preparation of a management situation analysis (on file at the Baker Resource Area Office). Consultation and coordination with agencies , organizations, and individuals occurred throughout the planning process.

Public Involvement

A notice was published in the Federal Register and local news media in March 1985 to announce the formal start of the RMP/EIS planning process. At that time a planning brochure was sent to the public to request further definition of issues within the planning area. An opportunity was provided to submit comments on proposed criteria to be used in formulating alternatives.

In October 1985 a notice of document availability was published in the Federal Register and in the local news media for the Baker Resource Management Plan Proposed Land use Alternatives brochure. An outline of proposed alternatives, major issues, and revised planning criteria were included in this document. Three alternatives ranged from emphasis on production of commodities to an emphasis on enhancement of natural values, with a middle ground alternative attempting to provide a balance between the two. The fourth (no action) alternative reflected existing management. The proposed alternatives brochure contained a map showing land status, commercial forest land, wildlife habitat and potential special management areas. The alternatives brochure generated 20 public comments.

Agencies and Organizations Contacted or Consulted

The RMP/EIS team contacted or received input from the following organizations during the development of the RMP/EIS.

Federal Agencies

U.S.D.I. Bureau of Indian Affairs
U.S.D.E. Bonneville Power Administration
U.S.D.I. Bureau of Mines
U.S.D.I. Bureau of Reclamation
U.S.D.I. Environmental Protection Agency

U.S.D.I. Fish and Wildlife Service
U.S.D.A. Forest Service
U.S.D.C. National Oceanic and Atmospheric Administration
U.S.D.I. National Park Service
U.S.D.A. Soil Conservation Service

State and Local Governments

State of Oregon
Department of Environmental Quality
Department of Forestry
Department of Geology & Mineral Industries
Department of State Lands
Department of Fish and Wildlife
Department of Transportation, State Parks, & Recreation Division
Department of Water Resources
Executive Department
Historic Preservation Officer
State Marine Board

State of Washington
Department of Fisheries
Department of Game

Oregon Counties
Baker County Commissioners
Grant County Commissioners
Malheur County Commissioners
Morrow County Commissioners
Umatilla County Commissioners
Union County Commissioners
Wallowa County Commissioners

Washington Counties
Asotin County Board of Commissioners
Garfield County Board of Commissioners

Organizations

Atlantic Richfield Company
Associated Oregon Loggers
Oregon Natural Heritage Data Base
Oregon California Trails Association
Oregon State Extension Service
Oregon Trails Tourism Council
Range Ecology Group
Sage Association
The Nature Conservancy
Union County Izaak Walton League
Wild Canyon Cattle Co., Inc.

Distribution List for the RMP/EIS

Federal Agencies

U.S. Department of Agriculture
Forest Service
Pacific Northwest Forest & Range Experiment Station
Pacific Northwest Research Natural Area Forestry Science Lab
Soil Conservation Service

U.S. Department of Commerce
National Marine Fisheries Service
National Oceanic & Atmospheric Administration

U.S. Department of Defence
Army Corps of Engineers

U.S. Department of Energy
Bonneville Power Administration
Federal Energy Administration
Federal Energy Regulatory Commission

U.S. Department of the Interior
Advisory Council on Historic Preservation
Bureau of Indian Affairs
Bureau of Mines
Bureau of Reclamation
Fish & Wildlife Service
Geological Survey
Natural Resources Library
Office of Public Affairs

U.S. Environmental Protection Agency

U.S. Federal Aviation Administration

National Marine Fisheries Service

National Weather Service

Pacific Northwest River Basins Commission

State and Local Governments

Oregon State
Department of Agriculture & Resource Economics
Department of Forestry
Department of Environmental Quality (DEQ)
Department of Fish and Wildlife
Department of Geology & Minerals Industry
Department of Land Conservation & Development (LCDC)
Department of Range & Resources
Department of Transportation, Parks & Recreation Division

Department of Water Resources
Division of State Lands
Executive Department A-95 Clearinghouse, Intergovernmental Relations Division
Governor
Historic Preservation Officer
Soil & Water Conservation Commission
State Marine Board
State Scenic Waterways
State Water Resources Board

Oregon Counties
Baker County Extension Service
Baker County Planning Commission
Grant County Commissioners
Harney County Commissioners
Malheur County Commissioners
Malheur County Extension Agent
Morrow County Commissioners
Morrow County Extension Agent
Morrow Soil & Water Conservation District
Union County Agent
Union County Commissioners
Umatilla County Extension Agent
Umatilla County Commissioners
Umatilla County Planning Department
Wallowa County Agent
Wallowa County Commissioners

Washington State
Department of Fisheries
Department of Game
Department of Natural Resources
Governor
State Parks & Recreation Commission

Washington Counties
Asotin County Agent
Asotin County Board of Commissioners
Garfield County Board of Commissioners

Idaho State
Department of Fish & Game

Interest Groups and Organizations

1000 Friends of Oregon

American Alpine Club
American Fisheries Society
American Forest Institute
American Horse Protection Association
AMOC Minerals Company
Anaconda Company
Associated Oregon Industries
Associated Oregon Loggers, Inc.
Association of Oregon Archaeologists
Atlantic Richfield Company
Audobon Society
Baker County Cattlemen's Association

Blue Mountain Forest Products
Boise Cascade Corporation

Chevron Resource Company
Columbia River Intertribal Fish Commission
Confederated Tribes of the Umatilla Indian Reservation
Confederated Tribes of Warm Springs
Continental Oil Company
Crown Zellerbach

Defenders of Wildlife
Desert Trail Association

Eastern Oregon Forest Protection Association
Eastern Oregon Mining Association
Eastern Oregon Sportsman
Ellingson Timber Company

Field and Stream
Friends of the Earth

Geothermal Resources International
Grand Canyon Dovies, Inc.

Hines Lumber Company
Homestake Mining Company

Idaho State Historical Society
Independent Petroleum Association of America
Industrial Forestry Association
Izaak Walton League of America

Keep Oregon Green Association

League of Oregon Woman Voters

Malheur County Historical Society
Mazamas

National Wildlife Federation
Native Plant Society of Oregon
Natural Mustang Association
Natural Resource Defense Council
Nez Perce Tribal Executive Committee
Northwest Environmental Defense Center
Northwest Mining Association
Northwest Pine Association
Northwest Power Planning Council
Northwest Timber Association

Occidental Minerals Corporation
Oregon Association of Counties
Oregon California Trails Association
Oregon Cattlemens Association
Oregon Council of Rock & Mineral Clubs
Oregon Environmental Council
Oregon Farm Bureau Federation
Oregon 4-Wheel Drive Clubs
Oregon Historical Society
Oregon Hunters Association

Oregon Mineral Council
Oregon Mining Association
Oregon Natural Resources Council
Oregon Packers & Guides Association
Oregon Sheep Growers
Oregon State University
Oregon State University Extension Service
Oregon Trail Tourism Council
Oregon Wilderness Coalition
Oregon Wildlife Federation

Pacific Logging Congress
Pacific Northwest 4-Wheel Drive Association
Pacific Power & Light Company
Public Lands Council
Public Lands Institute

Range Ecology Group

Sage Association
Sage Country Alliance for Good Government
Sierra Club
Society for Range Management

The Nature Conservancy
The Wilderness Society
The Wildlife Society
Treasure Valley Rock & Gem Club

Union County Izaak Walton League

Warm Springs Tribal Commission Planning Department
Western Forest Industries Association
Western Land Exchange Company
Wild Canyon Cattle Company, Inc.
Wildlife Management Institute

Approximately 900 additional individuals and organizations who have expressed an interest in management of public lands in the planning area were also sent copies of the RMP/EIS. Included in this group are all grazing lessees within the planning area, members of the State legislature, U.S. Congressional delegation, various educational institutions, and radio, newspaper and television media.

Chapter 6
References and Glossary

List of Preparers

Although individuals have primary responsibility for preparing sections of an EIS, the document is an interdisciplinary team effort. In addition, internal review of the document occurred throughout preparation. Specialists at the District and State Office levels of the Bureau reviewed the analysis and supplied information. Contributions by individual preparers may be subject to revision by other BLM specialists and by management during the internal review process.

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Glossary of Terms

Abatement - Suppression or termination

Areas of Critical Environmental Concern (ACEC) - Places within public lands where special management attention is required to protect unique values.

Activity Plan - A site-specific plan for the management of one or more resources (for example a Habitat Management Plan, Allotment Management Plan). This is the most detailed level of BLM planning.

Actual Use - The true amount of grazing AUMs, based on the numbers of livestock and grazing dates submitted by the livestock operator and confirmed by periodic field checks by the BLM.

Adjustments - Changes in animal numbers, periods of use, kinds of classes of animals or management practices as warranted by specific conditions.

Allotment - An area of land where one or more livestock operators graze their livestock. Allotments generally consist of BLM lands but may also include other federal managed, state owned, and private lands. An allotment may include one or more separate pastures. Livestock numbers and periods of use are specified for each allotment.

Allotment Management Plan (AMP) - An intensive livestock grazing management plan dealing with a specific unit of rangeland, based on multiple use resource management objectives. The AMP considers livestock grazing in relation to the renewable resources such as watershed, vegetation, and wildlife. An AMP establishes the season of use, the number of livestock to be permitted on the range, and the range improvements needed.

Alluvium - Well sorted soil and rock debris deposited by water.

Anadromous - Fish Fish that migrate from the ocean to breed in fresh water. Their offspring return to the ocean.

Animal Unit Month (AUM) - The amount of forage consumed by one mature cow and calf under six months, for one month. The amount of forage consumed by one horse, or five sheep, or five deer, or six bighorn for one month is considered equal to one cow AUM; also a unit of measurement of grazing privilege that represents the privilege of grazing one animal for one month.

Archaeological Site - Geographic locale containing structures, artifacts, material remains, and/or other evidence of past human activity.

Aspect - The direction a slope faces.

Available Forestland - The commercial and woodland forestland base remaining after all legal, economic and multiple use considerations are determined and assessed through the Bureau land use planning process.

Best Forest Management Practices - General forest management practices which are consistent for all timber harvest and treatment activities.

Big Game Animals - Limited to elk, mule deer, bear, mountain goats, and bighorn sheep in Baker Resource Area in this document.

Board Foot - A unit of solid wood, one foot square and one inch thick.

Browse - To browse is to graze a plant; also, browse (noun) is the tender shoots, twigs, and leaves of shrubs often used as food by cattle, deer, elk, and other animals.

Buffer Strip - A protective area adjacent to an area of concern that requires special attention or protection. In contrast to riparian zones, which are ecological units, buffer strips can be designed to meet varying management concerns.

Cairn- A heap of stones set up as a landmark, monument, tombstone, and so forth.

Carrying Capacity - In livestock grazing, it is the maximum stocking rate possible without damaging vegetation or related resources. Carrying capacity may vary from year to year on the same area due to fluctuating forage production.

Catchment - A structure built to collect and retain water.

Clearcutting - A method of timber harvesting in which all trees, merchantable or unmerchantable are cut from an area.

Climax Plant Community - The vegetative community that emerges after a series of successive vegetational stages and perpetuates itself indefinitely unless disturbed by outside forces.

Commercial Forestlands - Forestland that is now producing or is capable of producing at least 20 cubic feet of wood per acre per year of commercial tree species.

Commercial Tree Species - Tree species whose yields are reflected in the allowable cut: pines, firs, spruce, Douglas fir, cedar, and larch.

Compaction - The process of packing firmly and closely together; the state of being so packed, (e.g., mechanical compaction of soil by livestock or vehicular activity). Soil compaction results from particles being pressed together so that the volume of soil is reduced. It is influenced by the physical properties of the soil, moisture content and the type and amount of compactive effort.

Commodity Resources - Goods or products of economic use or value.

Coordinated Resource Management PLAN (CRMP) - A specific management plan for a unit of land developed by all landowners (Federal, State, private, and so on) and affected interests for management of all resources and land uses (grazing, timber, wildlife, habitat, and so on) within the land unit.

Cow-Calf Operation - A livestock operation on which a basic breeding herd of cows, heifers and bulls is maintained. The cows produce a calf crop each year and the operation keeps some heifer calves from each crop for breeding herd replacements. The operation sells the rest of the calf crop between the ages of 6-12 months along with old or nonproductive cows and bulls.

Critical Growth Period - A specified period of time in which plants need to develop sufficient carbohydrate reserves and produce seed, for instance approximately the months of May and June for bluebunch wheatgrass.

Critical Habitat - Any habitat which, if lost, would appreciably decrease the likelihood of the survival and recovery of a threatened or endangered species or a distinct segment of its population. Critical habitat may represent any portion of the present habitat of a listed species and may include additional areas for reasonable population expansion. Critical habitat must be officially designated as such by the Fish and Wildlife Service or the National Marine Fisheries Service.

Critical Winter Range - That area where all individuals of the species of interest are located at the point in time when distribution is most restricted over an average five winters out of ten.

Crucial Wildlife Habitat - Parts of the habitat necessary to sustain a wildlife habitat population at critical periods of its life cycle. This is often a limiting factor on the population, such as breeding habitat, winter habitat, and so forth.

Cultural Resources - Fragile and nonrenewable elements of the environment including archaeological remains (evidence of prehistoric or historic human activities) and sociocultural values traditionally held by ethnic groups (sacred places, traditionally utilized raw materials, etc.).

Cultural Site - Any location that includes prehistoric and/or historic evidence of human use or that has important sociocultural value.

Custodial (C) Category Allotments - These are grazing allotments that are unfenced, small tracts, which are intermingled with much larger acreages on non-BLM rangelands, this limiting BLM's management opportunities.

Deferment - The withholding of livestock grazing on an area until a certain stage of plant growth is reached.

Deferred Grazing - Discontinuance of livestock grazing on an area for a specified period of time during the growing season to promote plant reproduction, establishment of new plants, or restoration of the vigor of old plants.

Deferred Rotation Grazing - Discontinuance of livestock grazing on various parts of range in succeeding years, allowing each part to rest successively during the growing season. This permits seed production, establishment of new seedings, or restoration of plant vigor. Two, but more commonly three or more, separate pastures are required.

Direct Sale - A sale at fair market value to a designated purchaser without competitive bidding.

Distribution - The uniformity of livestock grazing over a range area. Distribution is affected by the availability of water, topography, and type and palatibility of vegetation as well as other factors.

Diversity - A measure of the variety of species and habitats in an area that takes into account the relative abundance of each species or habitat.

Early Seral - Ecological condition class that corresponds to 0 to 25 percent of the plant composition found in the potential climax plant community. It could be considered synonymous with poor range condition.

Easements - A right held by one person to make use of the land of another for a limited purpose, as right of passage.

Ecological Range Condition - Four classes used to express the degree to which the condition classes composition of the present plant community reflects that of climax. They are as follows:

Successional Stage	Percentage of Present Plant Community that is Climax for the Range Site
Climax	76-100
Late Seral	51-75
Middle Seral	26-50
Early Seral	0-25

Ecosystem - An ecological unit consisting of both living and nonliving components which interact to produce a natural, stable system.

Endangered Species - A plant or animal species whose prospects for survival and reproduction are in immediate jeopardy, as designated by the Secretary of the Interior, and as is further defined by the Endangered Species Act of 1973, as amended.

Endemic Vegetation - Vegetation limited or restricted to a given site or region due to its physiological requirements for specific soil conditions, climatic factors or other physical features.

Environmental Impact - The positive or negative effect of any action upon a given area or resource.

Environmental Impact Statement (EIS) - A formal document to be filed with the Environmental Protection Agency that considers significant environmental impacts expected from implementation of a major Federal action.

Ephemeral Stream - A stream that flows only after rain or during snow melt.

Erosion - Detachment and movement of soil or rock fragments by water, wind, ice or gravity.

Exclosure - An area fenced to exclude livestock.

Excluded Forest Management - The management of forestland areas where management for forest products is excluded.

Extensive Recreation Management Areas (ERMAs) - Areas containing opportunities for local recreation where less intensive management is needed to achieve recreation objectives.

Federal Land Policy and Management Act of 1976 (FLPMA) - Public Law 94-579. October 21, 1976, often referred to as the BLM's "Organic Act" which provides the majority of the BLM's legislated authority, direction, policy and basic management guidance.

Floodplain - The relatively flat area or lowlands adjoining a body of standing or flowing water which has been or might be covered by floodwater.

Forage - All browse and herbaceous foods that are available to grazing animals including wildlife and domestic livestock.

Forb - A broad-leafed herb that is not a grass, sedge, or rush.

Glacial Outwash - The material, chiefly sand or gravel, washed from a glacier by the action of meltwater.

Glacial Till - Glacial drift consisting of an unassorted mixture of clay, sand, gravel, and boulders; a stiff clay.

Grazing Preference - The total number (active and suspended nonuse) of animal unit months of livestock grazing on public land apportioned and attached to base property owned or controlled by a permittee.

Grazing System - The manipulation of livestock grazing to accomplish a desired result.

Groundwater - Subsurface water that is in the zone of saturation.

Habitat - A specific set of physical conditions that surround a species group of species, or a large community. In wildlife management, the major constituents of habitat are considered to be food, water, cover and living space.

Habitat Diversity - The relative degree or abundance of plant species, communities, habitats or habitat features (e.g. topography, canopy layers) per unit of area.

Habitat Management Plan - A plan for the management of wildlife habitat.

Habitat Type - The collective area which one plant association occupies or will come to occupy as succession advances The habitat types is defined and described on the basis of the vegetation and associated environment.

Improve (I) Category Allotment - These are grazing allotments that have a potential for resource improvements where BLM controls enough land to implement changes.

Infiltration - The gradual downward flow of water from the surface into the soil profile.

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Issue - A subject or question of widespread public discussion or interest regarding management of public lands within the Baker Resource Area of the Vale District and identified through public participation.

Impact - A spatial or temporal change in the human environment caused by man. The change should be (1) perceptible, (2) measurable, and (3) relatable through a change agent to a management activity or alternative.

Intensive Forest Management - The management of available forestland areas where forest management is one of the many uses but where other uses or resource values are **not** emphasized.

Intermittent Stream - A stream which flows most of the time but occasionally is dry or reduced to pools.

Land Treatment - All methods of range development and soil stabilization such as reseeding, sagebrush control (burning and mechanical), pitting, furrowing, water spreading, etc.

Late Seral - Ecological condition class corresponding to 51 to 75 percent of the plant composition found in the potential natural plant community. Synonymous with good range condition.

Leasable Minerals - Minerals subject to lease by the federal government, including oil, gas, and coal.

Lease - An instrument through which interests are transferred from on party to another, subject to certain obligations and considerations.

Lek - A site to which birds regularly resort for purposes of sexual display and courtship.

Licensed Use - Active use AUMs that a permittee has paid for during a given grazing period.

Lithic - A stone or rock that may be either abraded into the proper form for use as a tool or shaped by knocking pieces (flakes) off. A cluster of flakes is called a "lithic scatter".

Lithic Scatter - A prehistoric site characterized by a scatter of stone tools and flakes that may indicate a number of functions.

Litter - A surface layer of loose, organic debris, consisting of freshly fallen or slightly decomposed organic materials.

Livestock Operation - A ranch or farm where a significant portion of the income is derived from the continuing production of livestock.

Loam - A rich, friable (crumbly) soil containing a relatively equal mixture of sand and silt and a somewhat smaller proportion of clay.

Locatable Minerals - Minerals or materials subject to disposal and development through the Mining Law of 1872 (as amended). Generally includes metallic minerals such as gold and silver and other materials not subject to lease or sale (some bentonites, limestone, talc, some zeolites, and so on).

Long-Term - A point in time 10 years following the beginning of the implementation phase for the RMP.

Maintain (M) Category Allotment - These are grazing allotments where satisfactory management has already been achieved through Conservation Plans, Coordinated Resource Management Plans, or Cooperative Agreements with adjoining landowners.

Major Transportation Facilities - Facilities for electric transmission, 69 KV and above and pipelines 10 inches diameter and larger.

Management Framework Plan (MFP) - land use plan that established coordinated land use allocations for all resource and support activities for a specific land area within a BLM district. It also establishes objectives and constraints for each resource and support activity and provides data for consideration in program planning. (This process has been replaced by the Resource Management Planning process).

Management Situation Analysis (MSA) - A comprehensive display of physical resource data and an analysis of the current use, production, condition and trend of the resources and the potentials and opportunities within a planning unit, including a profile of ecological values.

Mid Seral - Ecological condition class that corresponds to 26 to 50 percent of the composition found in the potential natural plant community. It could be considered synonymous with fair range condition.

Mineral Entry - The locating and filing of mining claims by an individual to protect his right to a valuable mineral.

Mineral Estate - The ownership of the minerals on the land.

Mitigating Measures - (a) Avoiding impacts by not taking a certain action or parts of an action. (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation. (c) Rectifying impacts by repairing, rehabilitating, or restoring the affected environment. (d) Reducing or eliminating impacts over time by preservation and

maintenance operations during the life of the action. (e) Compensating for impacts by replacing or providing substitute resources or environments.

Multiple Use - Balanced management of various surface and subsurface resources with permanent impairment of the productivity of the lands that will best meet present and future needs.

National Register of Historic Places - The official list, established by the Preservation Act of 1966, of the Nation's cultural resources worthy of preservation. The Register lists archaeological, historic, and architectural properties (such as districts, sites, buildings, structures, and objects) nominated for their local, State, or National significances by State and/or Federal agencies and approved by the National Register staff. The Register is maintained by the National Park Service.

Natural Area - A physical and biological area which either retains or has reestablished its natural character, although it need not be completely undisturbed, and which typifies native vegetation and associated biological and geological features or provides habitat for rare or endangered animal or plant species or includes geologic or other natural features of scientific or educational value.

Noncommercial Forestland - Land which is not capable of yielding at least 20 cubic feet of wood per acre per year of commercial species or land which is capable of producing only noncommercial tree species.

Noncommercial Tree Species - Species whose yields are not reflected in the allowable cut, regardless of their salability. Includes all hardwoods, juniper and Mountain mahogany.

Nonoperable Forestlands - Unsuitable for any type of timber harvest activity due to their 1) physical features; for example, extremely rocky, boulder fields, rim rocks, rock outcrops, and unsafe for logging operations and/or 2) forestlands on which logging activity will result in the loss of the site's potential for producing commercial tree species; for example, loss of soil through erosion, slope failure, and/or the inability to reforest the site within acceptable time limits (usually five to fifteen years) even with special reforestation techniques.

Noxious Weeds - A weed specified by law as being especially undesirable, troublesome and difficult to control.

Off-Road Vehicle (ORV) - Any motorized track or wheeled vehicle designed for cross-country travel over any type of natural terrain.

Off-Road Vehicle Designation -

Open: Designated areas and trails where off-road vehicles may be operated (subject to operating regulations and vehicle standards set forth in BLM Manuals 8341 and 8343).

Limited: Designated areas and trails where the use of off-road vehicles is subject to restrictions, such as limiting the number or types of vehicles allowed, dates, and times of use (seasonal restrictions); limiting use to existing roads and trails; or limiting use to designated roads and trails. Under the designated roads and trails designation, use would be allowed only on roads and trails that are signed for use. Combinations of restrictions are possible, such as limiting use to certain types of vehicles during certain times of the year.

Closed: Designated areas and trails where the use of off-road vehicles is permanently or temporarily prohibited. Emergency use of vehicles is allowed.

Old Growth Stand - A stand of trees that is past full maturity and showing signs of decadence, usually 200 years or older (large trees, snags and down logs, multilayered canopy, many species).

Operations Inventory - An intensive forest inventory which provides managers with information showing the location, acreage, silvicultural needs, and mortality-salvage or thinning needs within each section of public land.

Outstanding Natural Area (ONA) - An area of unusual natural characteristics where management of recreation activities is necessary to preserve those characteristics.

Permeability (Soil) - The quality of a soil horizon that enables water or air to move through it; may be limited by the presence of one nearly impermeable horizon even though the others are permeable.

Permittee - One who holds a permit to graze livestock on public land. Holder of a license or permit for grazing on an allotment.

Perennial (Permanent) Stream - A stream that ordinarily has running water on a year round basis.

Period of Use - The time of livestock grazing on a range area based on the type of vegetation or stage of vegetative growth.

Placer Mining - A method of mining in which the surface material is washed for gold or other valuable minerals. When water under pressure is employed to break down the gravel, the term hydraulic mining is generally used.

Plant Community - An association of plants of various species found growing together in different areas with similar site characteristics.

Plant Succession - The process of vegetative development whereby an area becomes successively occupied by different plant communities of higher ecological orders.

Prehistoric - Refers to a period wherein Native American cultural activities took place which were not yet influenced by contact with historic non native culture(s).

Prescribed Fire - A planned burning of live or dead vegetation under favorable conditions which would achieve desired results.

Priority Use Area - An area where a particular resource, such as wildlife habitat, would receive management emphasis or priority. The areas are either unique, significant, or best suited for the development, management, use, or protection of a resource. The principles of multiple use and sustained yield would be maintained in each priority use area. Many different uses would be allowed in each priority area, but the priority use would be the first priority.

Public Lands - Any land and interest in land (such as mineral estate) owned by the United States and administered by the Secretary of the Interior through the Bureau of Land Management. May include public domain or acquired lands in any combination.

Range Site - A type of rangeland with inherently different soil characteristics that produce a significantly different kind or amount of potential vegetation.

Raptors - Bird species which have adapted to seize prey, such as eagles and hawks.

Recreation and Public Purposes Act (R&PP ACT) - This act authorized the Secretary of the Interior to lease or convey public lands for recreational and public purposes under specified conditions to states or their political subdivisions and to nonprofit corporations and associations.

Regeneration - The renewal of a commercial tree crop, whether by natural or artificial means; also, the young crop itself.

Research Natural Area (RNA) - A naturally occurring physical or biological unit (RNA) where natural conditions are maintained insofar as possible. Further, the natural features are preserved for research and educational purposes. The features to be preserved may be important or unique ecosystems, habitats, organisms, and may be terrestrial, freshwater, or marine.

Reserved Federal Mineral Estate - Property on which the federal government has retained ownership of minerals (and the right to remove the minerals) while transferring the surface estate into private or other ownership.

Residual Ground Cover - That portion of the total vegetative ground cover that remains after livestock grazing.

Restricted Forest Management - The management of available forestland areas where forest management is one of the many uses but other resource values are emphasized.

Right-of-Way - A permit or an easement which authorizes the use of public lands for certain specified purposes, commonly for pipelines, roads, telephone lines, electric lines, reservoirs, and so on; also, the lands covered by such an easement or permit.

Riparian Zone or Area - Those terrestrial areas where the vegetation complex (Area or Zone) and microclimate conditions are products of the combined presence and influence of perennial and/or intermittent water, associated high water tables and soils which exhibit some wetness characteristics. Normally used to refer to the zone within which plants grow rooted in the watertable of streams, ponds and springs.

Rip Rap - A quantity of broken stone for foundations, revetments of embankments, and so on a foundation or wall of stones thrown together irregularly.

Runoff - That part of precipitation, as well as any other flow contributions, which appears in surface streams, either perennial or intermittent.

Salable Minerals - High volume, low value mineral resources including common varieties of rock, clay, decorative stone, sand, and gravel.

Sediment - Soil, rock particles and organic or other debris carried from one place to another by wind, water or gravity.

Sensitive Species - Species not yet officially listed but which are undergoing a status review or are proposed for listing according to a Federal Register Notice published by the Secretary of the Interior or Secretary of Commerce or according to comparable States' documents published by State officials. (Reference Instruction Memorandum WO 80-722).

Seral Stage - The series of relatively transitory communities, including plants and animals which develop during ecological succession, beginning after the Pioneer State (such as beginning with bare ground) to the Climax Stage.

Shrub - A low woody plant, usually with several stems, that may provide food and/or cover for animals.

Short-Term - The period of time needed to implement management's decisions following the completion of the EIS approximately 5 to 7 years.

Site Preparation - Any action taken in conjunction with a reforestation effort (natural or artificial) to create an environment which is favorable for survival of suitable trees during the first growing season. This environment can be created by altering ground cover, soil or microsite conditions, using biological, mechanical, or manual clearing, prescribed burning, herbicide or a combination of methods.

Site Class - A forest management term denoting site productivity and measured in six productivity classes (i.e. Site Class I - highest productivity, Site Class VI - lowest productivity).

Slash - The branches, bark, tops, cull logs, and broken or uprooted trees left on the ground after logging has been completed.

Slope Failure - Downward and outward movement of material in an unconsolidated mass; (slumped); material that has slid down from a higher position on a slope.

Slump - Rotational failure of a discrete block of soil on a failure plane that is curved from top to bottom and from side to side. The block rotates downward and outward along this failure plane while remaining more or less intact.

Snag - A standing dead tree from which the leaves and most of the limbs have fallen.

Soil Loss Tolerance - The maximum amount of soil loss as expressed in tons/acre/year that can be tolerated and still permit a high level of productivity to be sustained indefinitely.

Soil Moisture - Water held in the root zone by capillary action. Part of the soil moisture is available to plants, part is held too tightly by capillary or molecular forces to be removed by plants.

Soil Productivity - Capacity of a soil, in its normal environment, for producing specified plants under specified management systems.

Special Concern - Those plants that are considered rare within Oregon, but may be common in occurrence within other states and/or there is at present insufficient justification for these plant species to be included on the Sensitive Plant Species list.

Split-Estate - An area of land where the surface is privately owned and the subsurface mineral resources are federally owned.

State Historic Preservation Officer (SHPO) - The official within each State, authorized by the State at the request of the Secretary of the Interior, to act as a liaison for purposes of implementing the National Historic Preservation Act of 1966.

Stocking Rate (Livestock) - An expression of the number of animals and the grazing period alloted to a specific area. It is usually expressed as a ratio, such as acres/AUM.

Stocked, 10 Percent - Tree seedlings and saplings (0.5 inches in diameter 4.5 feet above the ground) that are well distributed over the land and are more than 30 per acre in number. Or, they are trees larger than 5 inches in diameter with foliage that covers at least 10 percent of the land surface area.

Succession - The orderly process of plant community change. The process by which one plant or animal community will succeed another over time given the same climatic conditions.

Suspended Sediment - Sediment suspended in a fluid by the upward components of turbulent currents or by colloidal suspension.

Sustainable Annual Harvest - The yield that a forest can produce continuously from a given level of management.

Thermal Cover - Vegetation or topography that prevents radiational heat loss, reduces wind chill during cold weather and intercepts solar radiation during warm weather.

Threatened Species - A plant or animal species that the Secretary of the Interior had determined to be likely to become endangered within the foreseeable future throughout all or most of its range.

Timber Production Capability Classification (TPCC) - The process of partitioning forestland into major classes indicating relative suitability to produce timber on a sustained yield basis.

Topography - The exact physical features and configuration of a place or region; the detailed and accurate description of a place or region.

Topsoil - Fertile soil or soil material, usually rich in organic matter, used to top-dress disturbed areas. Topsoil is better suited to supporting plants than other material.

Total Suspended Particulates - All solid or semi-solid material found in the atmosphere.

Trend - The direction of change in range condition over a period of time, expressed as upward, static, or downward.

Understory Species - Shade-tolerant plant species which characteristically grow beneath the forest canopy, e.g. blackberry and rhododendron.

Vegetative (Ground) Cover - The percent of land surface covered by all living vegetation (and remnant vegetation yet to decompose) within 20 feet of the ground.

Vegetative Manipulation - Alternation of present vegetation by using fire, plowing, or other means.

Vegetation Type - A plant community with immediately distinguishable characteristics, based upon and named after the apparent dominant plant species.

Visitor Day - Twelve hours of recreational use by one person.

Visual Resources - The land, water, vegetation and animals that comprise the scenery of an area.

Visual Resource Management (VRM) - The planning, design, and implementation of management objectives to provide acceptable levels of visual impacts.

Visual Resource Management Classes - The degree of acceptable visual change within a characteristic landscape. A class is based upon the physical and sociological characteristics of any given homogeneous area and serves as a management objective.

Class I areas (preservation) provide for natural ecological changes only. This class includes primitive areas (HDB), some natural areas, some wild and scenic rivers, and other similar sites where landscape modification activities should be restricted.

Class II (retention of the landscape character) includes areas where changes in any of the basic elements (form, line, color or texture) caused by management activity should not be evident in the characteristic landscape.

Class III (partial retention of the landscape character) includes areas where changes in the basic elements (form, line, color, or texture) caused by management activity may be evident in the characteristic landscape. However, the changes should remain subordinate to the visual strength of the existing character.

Class IV (modification of the landscape character) includes areas where changes may subordinate the original composition and character; however they should reflect what could be a natural occurrence within the characteristic landscape.

Class V (rehabilitation or enhancement of the landscape character) includes areas where change is needed. This class applies to areas where the landscape character has been so disturbed that rehabilitation is needed. This class would apply to areas where the quality class has been reduced because of unacceptable intrusions. It should be considered an interim short-term classification until one of the other classes can be reached through rehabilitation or enhancement.

Water Quality - The chemical, physical, and biological characteristics of water with respect to its suitability for a particular use.

Watershed - All lands which are enclosed by a continuous hydrologic drainage divide and lie upslope from a specified point on a stream.

Watershed Values - Soil productivity and erosional stability and the storage, yield, quality, and quantity of surface and subsurface waters.

Water Yield - The quantity of water derived from a unit area of watershed.

Wetlands or Wetland Habitat - Permanently wet or intermittently flooded areas where the water table (fresh, saline, or brackish) is at, near, or above the soil surface for extended intervals, where hydric (wet) soil conditions are normally exhibited, and where depths generally do not exceed two meters. Vegetation generally consists of emergent water loving forms (hydrophytes) which require at least a periodically saturated soil condition for growth and reproduction. In certain instances, vegetation may be completely lacking.

Wilderness Study Area (WSA) - An area determined to have wilderness characteristics. Study areas will be subject to interdiciplinary analyses and public comment to determine wilderness suitability. Suitable areas will be recommended to the President and Congress for wilderness designation.

Winter Range - That area where all individuals of

the species of interest are located for over an average of five winters out of ten during the period 15 December to 15 March.

Withdrawals - Actions which restrict the use public lands and segregate the lands from the operation of some or all of the public land or mineral laws.

Woodlands - Forestland not included in the commercial forestland sustainable harvest level. Includes all non-commercial and non-suitable forestland.

Suitable Woodlands - Non-commercial forestland and commercial forestland that is non-suitable (not included in the sustainable harvest level) because of the fragile site and/or requires longer than 15 years to reforest after harvest.

Non-Suitable Woodlands - Forestland not capable of sustaining a harvest level of forest products.

Acronyms

ACEC	Area of Critical Environmental Concern
ACMP	Area of Critical Mineral Potential
AMP	Allotment Management Plan
AUM	Animal Unit Month
BLM	Bureau of Land Management
BPA	Bonneville Power Administration
CEQ	Council of Environmental Quality
CFR	Code of Federal Regulations
CMA	Cooperative Management Agreement
CRMP	Coordinated Resource Management Plan
DNR-WNHP	Department of Natural Resources-Washington Natural Heritage Program
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ERMA	Extensive Receation Management Area
FEIS	Final Environmental Impact Statement
FLPMA	Federal Land Policy and Management Act
FY	Fiscal Year
GLO	General Land Office
GRO	Geothermal Resource Operational Orders
HCNRA	Hells Canyon National Recreaton Area
HMP	Habitat Management Plan
I	Improve Grazing Allotment
IMPLAN	Input Model Plan developed by the U.S. Forest Service to measure the economic effects of changes in program-related activities.
M	Maintain Grazing Allotment
MFP	Management Framework Plan
MMBD	Million Board Feet
MSA	Management Situation Analysis
NEPA	National Environmental Policy Act
NPPC	Northwest Power Planning Council
NSO	No Surface Occupancy - Minerals
NTL	Notices to Lessees
ONA	Outstanding Natural Area
ORV	Off-Road Vehicle
PL	Public Land
R & PP	Recreation and Public Purposes Act
RMP	Resource Management Plan
RNA	Research Natural Area
RPS	Range Program Summary
ROD	Record of Decision
SCS	Soil Conservation Service
SHPO	State Historical Preservation Officer
SMA	Special Management Area
TPCC	Timber Production Capability Classification
URA	Unit Resource Analysis
FS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VRM	Visual Resource Management
WSA	Wilderness Study Area
WDG	Washington State Department of Game
WDNR	Washington State Department of Natural Resources

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Appendices

Appendix A Soil Characteristics Summary for the Baker Planning Area

Soils Unit	Soil Association	County	Topography	Depth	Textures	Average Slope	Erosion Hazard Water	Potential Wind
1	Ruckles-Snake-Red Cliff	Baker	Terraces and uplands	Shallow to moderately deep	Stony, clay loam, channery loam, and gravelly loam soils	Gently sloping to extremely steep	High	Slight
12	Sinker-Loveline	Baker	Nearly level to extremely steep	Mod. deep	Very channery loam and channery loam soils	Gently sloping to extremely steep	High	Slight
14	Brownlee-Taylorpatch	Baker	Nearly level to very steep	Deep	Loam soils	Nearly level to steep	High	Slight
20	Snowside-Kilmerque	Baker	Nearly level to extremely	Deep and Mod. deep	Gravelly loam and loam soils	Gently sloping to extremely steep	High steep	Slight
6	Shell-Zumwalt-Powwatka	Wallowa	Nearly level to moderately sloping uplands	Mod. deep	Silt loam and stony silt loam	1 to 75% slopes	High	Slight
9	Powwatka-Zumwalt-Shell	Wallowa	Nearly level to moderately sloping uplands	Mod. deep	Silt loam and cobbly silt loam	1 to 75% slopes	High	Slight
10	Shell Association	Wallowa	Steeply sloping dissected drainages of the uplands	Mod. deep	Stony Silt loam	15 to 75% slopes	High	Slight
11	Ruckles-Wrentham Association	Wallowa	Steeply sloping dissected drainages of the upland	Shallow to mod. deep	Stony to cobbly silt loam	45 to 75% slopes	High	Slight
15	Klicker-Snell-Tiko Association	Wallowa	Gently sloping to steep upland soils of the Blue Mtns	Moderately deep to deep	Ashy silt loam to stony silt loam	1 to 75%	High	Slight
16	Steep mountainous lands	Wallowa	Gently sloping to steep upland soils of the Blue Mtns			1 to 75%	High	Slight
5	Watama-McMurdo-Lookingglass	Union	Gentle slopes to uplands	Moderately deep and deep	Silt loam	2 to 25%	High	Slight
6	Cougharour-Enolra	Union	Gentle slopes to uplands	Moderately deep and deep	Silt loamy variant silt loam	7 to 35%	High	Slight
7	Ruckles-Lookout	Union	Uplands	Shallow and mod. deep	Very stony silt loam, very stony clay loam	20 to 65%	High	Slight
8	Gaima-Anatone-Urupt	Union	Ridgetops uplands and slopes	Shallow and mod. deep	Stony loam, silty clay loam	20 to 40%	High	Slight
9	Lookingglass-Elmug-Wrest	Union	Toe slopes alluvial fans uplands	Deep to silt loam	Cobbly silt loam	2 to 20%	High	Slight
10	Tolo-Klicker-Cowsley	Union	Upland north & south slopes	Deep	Silt loam to very stony silt loam	15 to 65%	High	Slight
11	Kamela-Lowridge-Herbig	Union	Ridgetops south slopes mountainous uplands	Deep	Silt loam to very stony silt loams	15 to 65%	High	Slight
1	Winchester	Morrow	Terraces	Very deep	Sand	0 to 12%	Slight	High

Soils Unit	Soil Association	County	Topography	Depth	Textures	Average Slope	Erosion Hazard Water	Erosion Potential Wind
2	Quincy-Koehler	Morrow	Terraces	Moderately deep and very deep	Fine sand to loamy fine sand	2 to 12%	Slight	High
3	Prosser	Morrow	Terraces uplands river edge	Mod. deep	Silt loams	1 to 20%	Slight	Moderate
4	Sagehill-Taunton	Morrow	Terraces	Mod. deep and very deep	Fine sandy loam	12 to 20%	Moderate	Moderate
5	Warden	Morrow	Terraces	Very deep	Silt loam	20 to 40%	High	Moderate
6	Xeric Torriothents Kimberly	Morrow	Canyon stream bottoms	Very deep	Fine sandy loam	0 to 3%	Slight	High
14	Waha-Waterbury-Rocky	Morrow	Plateaus and peaks dissected by deep, steep walled canyons	Very shallow to mod. deep	Silt loam extremely stony silt loams, very gravelly loams	0 to 75%	High	Slight
15	Hankins-Klicker	Morrow	" "	Mod. deep and very deep	Silt loams and stony silt loams	0 to 75%	High	Slight
17	Tolo-Klicher-Hall Ranch	Morrow	" "	Mod. deep and very deep	Silt loams, stony silt loams and loams	0 to 75%	High	Slight
1	Powder-Umapine reclaimed-Pedigo	Umatilla	Floodplains	Deep to very deep	Fine sandy	0 to 3%	Moderate	High
3	Quincy-Starbuck-Rock outcrop	Umatilla	Terraces	Shallow to deep	Fine sand to silt loam	0 to 40%	Moderate	High
4	Quincy-Winchester	Umatilla	Terraces	Deep	Fine sand to coarse sand and loamy sand	0 to 40%	Moderate	High
5	Adkins-Sagehill-Quincy	Umatilla	Terraces	Deep	Sandy	0 to 45%	Moderate	High
6	Shano-Burke	Umatilla	Rolling hills, hill slopes, terraces & fans	Mod. deep to deep	Silt loam	0 to 30%	Moderate	High
7	Ritzville	Umatilla	" "	Deep	Silt loam	0 to 60%	Moderate	High
2	Freewater-Hermiston Xerofluents	Umatilla	Floodplains	Deep	Cobbly sand loam to silt loam	0 to 3%	High	Slight
10	Pilot Rock	Umatilla	Rolling hills, hill slopes, terraces & fans	Mod. deep	Silt loam	1 to 40%	High	Slight
11	McKay	Umatilla	" "	Deep	Silt loam	0 to 25%	High	Slight
14	Athena	Umatilla	Rolling hills, Deep hill slopes & ridgetops in the foothills of the Blue Mtns	Fine silty loam	1 to 55%	High	Slight	
15	Gwin-Gurdane-Rockly	Umatilla	" "	Mod. deep to very shallow	Silt loam to stony silt loam	3 to 60%	High	Slight
16	Waha-Palouse-Gwin	Umatilla	" "	Shallow to deep	Silt loam to stony silt loam	0 to 50 35%	High	Slight
17	Gurdane-Gwinly	Umatilla	" "	Shallow to mod. deep	Silt loam to stony silt loam	0 to 60%	High	Slight
18	Cowsely-Thatuna	Umatilla	Plateaus in the Blue Mtns	Deep	Silt loam surface over clay sub-soil	1 to 50%	High	Slight
22	Gwin-Umatilla-Kahler	Umatilla	Hill slopes in the Blue Mtns	Shallow to	Silt loam to stony silt loam	5 to 70%	High	Slight

Appendix B Vegetative Communities in the Baker Planning Areas

Annual Grassland —	Primary component is cheatgrass or medusahead wildrye. Little or no shrub or tree species present. Generally poor ecosite condition. Forbs may be present or absent.
Perennial Grassland —	Dominant species commonly are bluebunch wheatgrass or Idaho fescue. May include bulbous bluegrass, needlegrass and some squirreltail. Little or no shrub or tree species present. Forbs often present. Generally good condition.
Artificial Seeding —	Crested wheatgrass, nomand alfalfa, intermediate wheatgrass; artificially seeded as range rehabilitation or forage improvement projects for livestock. Some shrubs (sagebrush, rabbitbrush), forbs, and native grasses occasionally interspersed.
Big Sage — Annual Grass —	Mountain, Wyoming or basin subspecies of big sagebrush dominant with an understory of cheatgrass or medusahead wildrye. Few other shrubs occurring. Forbs present in varying amounts. Usually sites experiencing heavy past grazing use.
Big Sage — Perennial Grass —	Mountain, Wyoming or basin subspecies of big sagebrush dominant with a understory of perennial grass; usually bluebunch wheatgrass or Idaho fescue. May also include Sandbergs bluegrass, pinegrass, bulbous bluegrass, squirreltail, or needlegrass. Forbs usually present with other shrubs being absent. Ecosite condition is mostly fair to excellent.
Big Sage — Mixed Shrub —	This community contains a variety of shrubs in addition to sagebrush including bitterbrush, squawapple, serviceberry, rabbitbrush, currant, chokecherry and sumac in various combination. Grasses are usually perennial, most commonly bluebunch wheatgrass and Idaho fescue. Many different forbs commonly occur. This is generally a good condition ecosite site.
Low Sage — Grass —	Dominant shrubs are stiff sage (*Artemisia rigida*) or three tip sage (*A. tripartita*), however low sage (*A. arbuscula*) and silver sage (*A. ceni*), though uncommon, may also occur. Any grass forb understory combination may be present. Most frequently Sandbergs bluegrass is the dominant grass and wild onion is frequently a common forb.
Saltbush — Greasewood —	Black greasewood is the dominant shrub with spiney hopsage and fourwing saltbush occurring infrequently. Big sagebrush and green rabbitbrush are also common shrubs. Saltgrass, giant wildrye, and cheatgrass are the most common grasses. Forbs are not abundant due to alkaline soil conditions.
Mountain Shrub Mix —	This higher elevation community is composed of a mixture of shrubs and little or no sagebrush. These include chokecherry, bittercherry, snowberry, mockorange, wildrose, serviceberry, ninebark and currant. Grasses commonly occurring are pinegrass, bluebunch wheatgrass, mountain brome, Idaho fescue, and elk sedge. A wide variety of forbs are present on most sites.

Juniper Hills —	Big sagebrush and western juniper are co-dominants. Other shrubs include squawapple, bitterbrush, and rabbitbrush. Sandbergs bluegrass, needlegrass, and bluebunch wheatgrass are most common, with prairie junegrass, Idaho fescue, and giant wildrye also occurring. Cheatgrass is dominant on poorer condition sites. Yarrow, lupine and arrowleaf balsamroot are very common forbs.
Rangeland Riparian —	These communities are found below 4000 feet and are dominated by water associated trees, shrubs and grasses. Black cottonwood, aspen, alder and birch are the most common tree species. Shrubs include hawthorne, willow, mockorange, chokecherry, wildrose and currant. A large number of forbs occur, depending upon condition. These can range from iris, fleabane, lupine, dandelion, and yarrow to invaders such as mullein, thistle, tarweed, and whitetop. Grasses include giant wildrye, Kentucky bluegrass, sedges and rushes. Cheatgrass is common on disturbed and heavily used sites.
Ponderosa Pine —	This forested type is found up to about 5000 feet in elevation and is dominated by ponderosa pine with a variety of understory types. Shrubs are generally sparse and include currant, snowberry, serviceberry, mockorange, bitterbrush, sagebrush, mountain mahogany and Oregon grape. Typical grasses are Kentucky bluegrass, pinegrass, bluebunch wheatgrass, Idaho fescue and junegrass. Forbs are very common.
Lodgepole Pine —	Lodgepole pine is dominant and is usually fairly dense. This is sometimes a successional community with white fir present in the understory. Huckleberry is commonly found as a dominant understory with few other shrubs. Pinegrass is the major grass species and some forbs such as strawberries, lupine and arrica also occur.
Low Elevation Mixed Conifer —	Douglas fir, white (grand) fir and western larch dominate this type. Few shrubs occur except for huckleberry which is common. Forb density is directly related to tree cover and a very wide variety of forbs may be found. Elk sedge, pinegrass, and slender hairgrass are typical grass species.
High Elevation Mixed Conifer —	This community occurs above 6000 feet in elevation. Subalpine fir and Englemann spruce are major overstory species along with white (grand) fir, Douglas fir, western larch, lodgepole pine and sometimes whitebark pine. Huckleberry is common with few other shrubs present. Grasses include pinegrass, elk sedge, squirreltail and needlegrass. Many forb species can be found depending upon overstory canopy cover.
Quaking Aspen —	A forested type with quaking aspen dominant. This community is limited to a few locations. Other tree species present are Douglas fir and grand fir. Chokecherry, snowberry, willow and currant are common shrubs. On poor condition sites false hellebore invades, becoming a dominant forb. Tufted hairgrass, Kentucky bluegrass, and sedges and rushes are among the most common grasses.
Forested Riparian —	Water associated species dominant above 4000 feet. Trees include aspen, cottonwood, alder, birch, and Rocky Mountain maple. Many shrubs present especially willow, ninebark, oceanspray, dogwood and honeysuckle. A large number of forbs occur and dominant grasses are Kentucky bluegrass, sedges and rushes.
Open Meadow —	Open areas in forested communities. Kentucky bluegrass and tufted hairgrass are the dominant plants. Willows are occasionally present. False hellebore invades in heavily grazed wetter sites.

Appendix C Summary of Geology and Mineralization in the Planning Area

Generalized Geologic Time Chart

Rock Group	Era	Period	Epoch	MM yrs. before present	Geologic Processes and Mineralizing Events	Types of Mineral Deposits
Cenozoic	Cenozoic	Quaternary	Recent to Pleistocene	2	Modern-day erosion, volcanic activity, lake formation and glaciation in high mountains. Deposition of lake clays and silts, alluvium, wind blown silt, volcanic ash and cinders.	Cinders, sand and gravel, common clay, gold and silver placer deposits.
		Tertiary	Pliocene to Miocene	24	Volcanism, hot springs, faulting, uplift and erosion. Extrusion of enormous volumes of Columbia River basalts (Miocene age) interbedded with lake and bog sediments, alluvium and pyroclastics in nonmarine environment. Uplift of Northern Blue Mountains and formation of Troy Basin.	Diatomite and peat deposited in lakes or bogs. Peat and other organic material changed into lignite, coal and natural gas in some areas. Large lignite deposits are present in the Troy Basin. Volcanic ash, tuff & lavas have been altered to bentonite and zeolites. Older gold and silver placers, geothermal related mercury-gold deposits, petrified wood, agate, semiprecious gems, perlite and obsidian occur.
			Oligocene to Paleocene	66	Volcanism and erosion resulting in Eocene to Oligocene Clarno and John Day Formations consisting of pyroclastics, lava, and sediments. Paleocene to Middle Eocene rocks are rare, probably due to erosion.	
Pre-Tertiary	Mesozoic	Cretaceous		144	Mountain building and erosion. Rock units missing due to erosion. Several thousand feet of relief developed on the older rocks.	
		Jurassic		208	Plate tectonics, faulting, and metamorphism. Addition of oceanic and island arc crust to continental margin of North America forming what is now northeastern Oregon followed by emplacement of large granitic intrusives and associated mineralization. Rocks deposited in this area include clastic sedimentary rocks and minor limestone.	Major gold and silver vein deposits associated with granitic intrusives, also copper, molybdenum, tungsten and antimony deposits. High grade, precious and base metal tactite deposits formed by contact of intrusives with limestone.
		Triassic		245	Island arc volcanism and sedimentation. Rocks formed include greenstones and metasediments mixed with shallow marine shales and limestones. Predominantly a marine envionment.	Volcanogenic metal deposits associated with fumarolic submarine volcanism include copper, gold, silver, lead and zinc. Also present are some precious and base metal vein deposits. Chromite and asbestos deposits are associated with ultramafic intrusive rocks. Commercial grade limestone deposits.
	Paleozoic	Permian to Devonian(?)		400(?)	Formation of oceanic crust and submarine volcanism followed by development of an island arc or arcs. Rocks formed include argillite, chert, tuff, lava flows and pods of limestone. These rocks have been intruded by mafic to ultramatic magma forming albite granite, diorite, gabbro and ultramatic intrusive bodies.	

Appendix D Paleontological Resources

Fossil Type	Fossil Names	Formation	Time Period/ Million Years	Locality
Plants				
1. Leaves	Undetermined dicotyledons; Citrus, Birch and Laurel Family, Hyrdrangea Flower, Conifers, Cycads, Ferns	Unnamed sandstone/ shale	Paleocene	Pilot Rock
	Magnolia Oak Palm Cinnamon Avacado Sycamore Fig	Clarno (?)	Eocene/37-60	Pilot Rock, Birch Creek, Arbuckle Mt-Willow Creek, Upper Burnt River
	Sequoia, Willow, Oak, Sweet Gum, Maple, Buckbrush	Diatomaceous beds in tuffaceous sediments.	Tertiary	Keating
2. Reproductive Parts	Pine	Waterlain ash sediments	Pliocene/3-12	Upper Burnt River
3. Woods	Western White Pine forest, Palm	Clarno	Eocene/37-60	Burnt River
	Tempskya	Marine Sandstone/ conglomerate	Cretaceous/60-136	Greenhorn
	Palmwood Float	Clarno Age		Huntington-Jamieson
Invertebrates				
1. Marine Invertebrates	Crinoids, Brachiopods, Bryozoans, Pelecypods	Seven Devils Group	Permian/225-280	Oxbow SE Wallowas
	Flat Clams, Ammonites	Seven Devils Group	Triassic/195-225	Snake River
	Ammonites, Pelecypods, Gastropods, Brachiopods, Sponges, Corrals, Echinoderms	Martin Bridge	Triassic/195-225	Snake River, Wallowas
	Ammonites	Coon Hollow	Jurassic/136-195	Ore-Wa Border, Snake River
	Brachiopods	Elkhorn Ridge Argillite	Permian/225-280	Elkhorn Mts
Terrestrial Vertebrates				
1. Skeletal Parts Jaws, Skulls	Mastodon	Tuffaceous ash sediments	Mid-Pliocene/12	Unity Basin Powder River
2. Bone Fragments	Unknown	Welded Tuff	Pliocene/3-12	Durkee
	Possible Horse, Camel, Giant Beaver	Tuffaceous ash sediments	Mid-Pliocene	Unity Basin
3. Fossil Teeth	Unknown Mammal	Tuffaceous Ash Sediments	Mid-Pliocene	Unity Basin

Fossil Type	Fossil Names	Formation	Time Period/ Million Years	Locality
4. Vertebrates, General	Unknown	Conglomerates	Pliocene/2-12	Arlington, Pendleton
	Unknown	Unconsolidated reworked sand	Pleistocene/11-2	Boardman
Marine Vertebrates				
1. Skeletal Parts	Ichthyosaurus (marine reptile)	Martin Bridge Limestone	Cenozoic/200	South Wallowas, near Baker

Appendix E Estimates of Gross Sales, Personal Income, and Employment

These measures of the economic effects of changes in program-related activities were estimated by use of an input-output model (IMPLAN) developed by the U.S. Forest Service, with which BLM developed the model representing the economy of northeast Oregon (Baker, Morrow, Umatilla, Union and Wallowa counties.

An interindustry (or input-output) model is a summary of all the transactions occurring in an area during a 1-year period, showing for each industry or economic sector the amount of its purchases from every other industry (input) and the amount of its sales to every other industry (output). Purchases of goods to be sold by trade industries are treated as direct sales by the producing industry, and trade industry transactions are limited to their gross margin accounts or the part of their transactions over and above the cost of goods sold. This information represents the interindustry relationships in the area and permits the estimation of how a change in one industry would affect other industries and the economy as a whole.

When a specific change occurs in the economy, such as an increase in cattle sales due to increased forage availability, the cattle industry purchases more from its suppliers, ranch families spend more, and so on. Recipients of these purchases increase their purchases. The end result of this process is increased activity throughout the economy. The effects on the industry in which the initial change occurs (such as, the cattle industry) are termed the direct effects of the change.

The direct effects plus the effects on other industries and individuals in the local economy make up the total local effects. Estimates of the effects per unit measure are shown in Table E-1 for the resource activities significantly affected by the potential program actions.

Table E-1 Economic Effects per Unit Measure [1]

	Initial Unit of Measure	Direct Gross Sales [2]	Total Personal Income	Total Employment (Jobs)
Livestock Production	1,000 AUMS	$20,520	$ 14,011.00	0.5741
Timber Production	MBF	$ 280	$ 204.00	0.0088
Big Game Hunting	RVD [3]	$ 16	$ 9.00	0.0003
Small Game Hunting	RVD	$ 24	$ 15.12	0.0003
Waterfowl Hunting	RVD	$ 20	$ 11.16	0.0002
Fishing	RVD	$ 17	$ 11.94	0.0002
Developed Recreation	RVD	$ 25	$ 16.13	0.0010
Floatboating	RVD	$ 29	$ 22.21	0.0011
ORV	RVD	$ 38	$ 26.25	0.0012
Other	RVD	$ 27	$ 20.39	0.0003

[1] Derived from interindustry model for northeast Oregon.
[2] Total sales (or expenditures) per unit in 1982 dollars. Livestock sales per AUM derived from ranch budget survey for BLM permittees/lessees in Baker, Morrow, Umatilla, Union and Wallowa counties (BLM 1982).
[3] RVD—Recreation Visitor Days.

Appendix F Development of Land Use Alternatives

Four multiple-use alternatives have been developed that describe the different management options available for BLM for the Baker Resource Area. These alternatives were developed to respond to the issues and concerns expressed by the public and BLM at the onset of the planning process. Each alternative proposes different solutions to the issues and concerns.

Each of the alternatives represents a complete plan to guide future management of public lands and resources. One alternative is No Action, which is a continuation of existing management and is used as a base for analyzing the other alternatives. The No Action alternative is a continuation of current management as directed by available inventories and planning documents.

Three additional alternatives were developed to show a spectrum of ways the resources could be managed. Objectives (Table F-1) for these alternatives were developed to: 1) emphasize commodities production and 2) emphasize protection of the natural environment. A preferred alternative was developed that allows resources to be managed to provide for both production and protection while resolving the planning issues, balancing land uses and resource values of the planning area and considering long-term public interest and benefits. Resource specialists developed capability levels to emphasize resource use and/or protection. Resource priority rankings were developed for each alternative (Table F-2) and capability levels were then adjusted to meet these priorities.

Alternative Mapping

Management Priority Areas (MPA) were developed which represent geographic zones that are unique, significant or unusually suited for development, management, protection, or use of a resource as determined by the capability analysis. Management Priority Areas were overlaid in different sequences based on the objective and priority ranking of each alternative. The resulting products are the alternative maps. The display of MPAs on the alternative maps represent management emphasis and does not represent exclusive use.

Table F-1 Objectives for Alternatives

A. Current Management (No Action)	B. Commodity Production	C. Natural Environment Protection	D. Preferred
This alternative would maintain the present management in the Baker MFP (1979), Grande Ronde MFP (1976), Rangeland Management Program for Baker & Malheur counties (1980), Oil and Gas Management Program (1975), Timber Management Program for Eastern Oregon (1976), Wilderness Studies MFP and Amendment 1982, and other resource activities plans.	This alternative would strive to maximize the utilization of resources and produces the greatest revenues from them. Maintenance of the natural environment would continue where they prove to be compatible with production of renewable and non-renewable resources or are mandated by law when resource trade-offs would be required, the resource affording the greatest opportunity to maximize revenues would be given preference.	This alternative would emphasize maximum protection of natural values. Resource uses and developments would still occur, but proposed developments would have to be compatible with the continuation of the long term maintenance of natural values. Resource trade-off would favor protection of renewable natural resources through more restrictive stipulations and authorizations.	This alternative would provide for both production and protection of resources and resource values. Resource trade-offs would favor balance.

Table F-2 Priority Ranking Within Alternatives
(Refer to Maps 8, 9 & 10 for a visual display of these alternative priorities)

B. Commodity Production	C. Natural Environment Protection	D. Preferred
1. Threatened & Endangered Species [1]	1. Threatened & Endangered Species	1. Threatened & Endangered Species [1]
2. Cultural Resources [1]	2. Special Management Areas	2. Cultural Resources [1]
3. Paleontological Resources [1]	3. Cultural Resources	3. Paleontological Resources [1]
4. Locatable Minerals	4. Paleontological Resources	4. Special Management Areas
5. Forestry	5. VRM	5. Locatable Minerals Active Areas
6. Grazing	6. Soils/Watershed	6. VRM—Class I & II
7. Recreation—General	7. Riparian/Aquatic	7. Riparian Areas
8. Salable Minerals	8. Wildlife	8. Wildlife Crucial Habitat
9. Oil and Gas	9. Recreation—General	9. Soils/Watershed [2]
10. Coal	10. Fire	10. Recreation [3]
11. Geothermal	11. Forestry	11. Forestry
12. Off Road Vehicle Use	12. Grazing	12. Grazing
13. Wildlife	13. Off Road Vehicle Use	13. Wildlife
14. Threatened & Endangered Species	14. Oil and Gas	14. Cultural/Paleo/T&E
15. Soils/Watershed	15. Geothermal	15. Salable Minerals
16. Cultural Resource	16. Coal	16. Leasable Minerals
17. Paleontological	17. Salable Minerals	17. Locatable Minerals—Inactive Areas
18. Riparian/Aquatic	18. Locatable Minerals	18. Fire
19. Special Management Areas		19. Off Road Vehicle Use
20. Fire		20. Recreation—General
21. Visual Resource Management (VRM)		21. Coal
		22. VRM—Class III & II

[1] Mandatory protection
[2] Moderate to high erosion potential area
[3] Spring Recreation Site and Bassar Diggins Recreation Site

Appendix G Standard Design Features

Introduction

The following list of standard design features includes project design features, reclamation measures, and procedures that could be applied as stipulations or requirements on proposed projects at the discretion of the authorized officer. The standard design practices will be used as mitigation measures throughout the planning area to avoid or reduce undesirable impacts. Because it is not possible to anticipate every kind of project that might be proposed, other practices not listed below might also be applied to particular projects.

Minerals

I. General

No "unnecessary or undue degradation" of Federal lands will be allowed. "Unnecessary or undue degradation" means surface disturbance greater than what would normally result when an activity is being accomplished by a prudent operator in usual, customary, and proficient operations of similar character and taking into consideration the effects of operations on other resources and land uses, including those resources and uses outside the area of operations. Failure to initiate and complete reasonable mitigation measures, including reclamation of disturbed areas or creation of a nuisance may constitute unnecessary or undue degradation. Failure to comply with applicable environmental protection statutes and regulations thereunder will constitute unnecessary or undue degradation.

II. Locatable Mineral Development under the Mining Laws (43 CFR 3809 and 3802)

A. All Operations

1. All operations, whether casual, under a notice, or by a plan of operations, shall be reclaimed.

2. All operations, including casual use and operations under either a notice or a plan of operations shall be conducted to prevent unnecessary or undue degradation of the federal lands and shall comply with all pertinent Federal and State laws, including but not limited to the following:

a. Air Quality. All operators shall comply with applicable Federal and State air quality standards, including the Clean Air Act (42 U.S.C. 1857 et seq.).

b. Water Quality. All operators shall comply with applicable Federal and State water quality standards, including the Federal Water Pollution Control Act, as amended (30 U.S.C. 1151 et seq.).

c. Solid Wastes. All operators shall comply with applicable Federal and State standards for the disposal and treatment of solid wastes, including regulations issued pursuant to the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act (42 U.S.C. 6901 et seq.). All garbage, refuse or waste shall either be removed from the affected lands or disposal of or treated to minimize, so far as is practicable, its impact on the lands.

d. Fisheries, Wildlife and Plant Habitat. The operator shall take such action as may be needed to prevent adverse impacts to threatened or endangered species, and their habitat which may be affected by operations.

e. Cultural and Paleontological Resources. Operators shall not knowingly disturb, alter, injure, or destroy any scientifically important paleontological remains of any historical or archaeological site, structure, building or object on Federal lands.

Operators shall immediately bring to the attention of the authorized officer any cultural and/or paleontological resources that might be altered or destroyed on federal lands by his/her operations, and shall leave such discovery intact until told to proceed by the authorized officer. The authorized officer shall evaluate the discoveries brought to his/her attention, take action to protect or remove the resource, and allow operations to proceed within 10 working days, after notification to the authorized officer of such discovery.

The Federal Government shall have the responsibility and bear the cost of investigations and salvage of cultural and paleontology values discovered after a plan of operations has been approved, or where a plan is not involved.

3. Maintenance and Public Safety

During all operations, the operator shall maintain his structures, equipment and other facilities in a safe and orderly manner. Hazardous sites or conditions resulting from operations shall be marked by signs, fenced, or otherwise identified to alert the public in accordance with applicable Federal and State laws and regulations.

4. Applicability of State Law

Nothing shall be construed to effect a preemption of State laws and regulations relating to the conduct of operations or reclamation on federal lands under the mining laws.

B. Notice of Operations, 5 Acres or Less

The following standards govern activities conducted under a notice:

1. Access routes shall be planned for only the minimum width needed for operations and shall follow natural contour, where practicable to minimize cut and fill.

2. All tailings, dumps, deleterious materials or substances, and other waste produced by the operations shall be disposed of so as to prevent unnecessary or undue degradation in accordance with applicable Federal and State Laws.

3. At the earliest feasible time, the operator shall reclaim the area disturbed, except to the extent necessary to preserve evidence of mineralization, by taking reasonable measures to prevent or control on-site and off-site damage to the federal lands.

4. Reclamation shall include, but shall not be limited to:

a. Saving of topsoil for final application after reshaping of disturbed areas have been completed;

b. Measures to control erosion, landslides, and water runoff;

c. Measures to isolate, remove, or control toxic materials;

d. Reshaping the area disturbed, application of the topsoil, and revegetation of disturbed areas, where reasonably practicable; and

e. Rehabilitation of fisheries and wildlife habitat.

C. Plan of Operations—Prevention of Unnecessary or Undue Degradation

1. When an operator files a plan of operations of a significant modification which encompasses land not previously covered by an approved plan, the authorized officer shall make an environmental assessment or a supplement thereto to identify the impacts of the proposed operations on the lands and to determine whether an environmental impact statement is required.

2. In conjunction with the operator, the authorized officer shall use the environmental assessment to determine the adequacy of mitigating measures and reclamation procedures included in the plan to insure the prevention of unnecessary or undue degradation of the land. If an operator advises he/she is unable to prepare mitigating measures, the authorized officer, in conjunction with the operator, shall use the environmental assessment as a basis for assisting the operator in developing such measures.

3. If, as a result of the environmental assessment, the authorized officer determines that there is "substantial public interest" in the plan, the authorized officer shall notify the operator, in writing, that an additional period of time, not to exceed the additional 60 days provided for approval of a plan is required to consider public comments on the environmental assessment.

III. Oil and Gas Leasing

A. Standard Stipulations

Standard stipulations are listed in Sec. 6 of Offer to Lease and Lease for Oil and Gas Form 3100-11. They are:

Lessee shall conduct operations in a manner that minimizes adverse impacts to the land, air and water, to cultural, biological, visual, and other resources, and to other land uses or users. Lessee shall take reasonable measures deemed necessary by lessor to accomplish the intent of this section. To the extent consistent with lease rights granted, such measures may include, but are not limited to, modification to siting or design of facilities, timing of operations, and specification of interim and final reclamation measures. Lessor reserves the right to continue existing uses and to authorize future uses upon or in the leased lands, including the approval of easements or rights-of-way. Such uses shall be conditioned so as to prevent unnecessary or unreasonable interference with rights of lessee.

Prior to disturbing the surface of the leased lands, lessee shall contact lessor to be apprised of procedures to be followed and modifications or reclamation measures that may be necessary. Areas to be disturbed may require inventories or special studies to determine the extent of impacts to other resources. Lessee may be required to complete minor inventories or short term special studies under guidelines provided by lessor. If in the conduct of operations, threatened or endangered species, objects of historic or scientific interest, or substantial unanticipated environmental effects are observed, lessee shall immediately contact lessor. Lessee shall cease any operations that would result in the destruction of such species or objects.

B. Special Stipulations

Special stipulations are attached to oil and gas leases to provide additional protection for fragile areas or critical resource values. Examples of special stipulations are seasonal restrictions for critical wildlife habitat and No Surface Occupancy to protect special values or fragile areas.

Timber Harvest

I. Sale Planning

A. Timber. Planning for a timber sale must precede actual field layout of the sale. General needs and goals for a particular area are established years in advance through the Timber Management Activity Plan (TMAP), the five-year timber sale plan and other long-range plans. Such plans are more sharply focused as certain tracts are selected for inclusion in short-range plans such as annual timber sale plan, and environmental assessments (EA) are prepared for specific sale areas. Once an area has been selected and approved for inclusion in the annual sale plan, the field forester, with the aid of resource specialists, translates the management plan and objectives into reality on the ground, making adjustments as necessary to best meet the stated plans and objectives and environmental protection requirements. Planning and preparation for all sales shall consider the following:

1. Long-Range & Short-Range Planning. Prior to field layout of a proposed sale, the Area Manager reviews, with the foresters assigned to the sale layout task, the following:

a. Timber management activity plan including EA/EIS for TMAP.

b. Five-year timber sale plan.

c. Management plans for special use areas and other activities, e.g., HMPs.

d. Annual timber sale plan including EA for proposed action.

e. Road transportation plan for area, including planned design standards.

f. Public access plan for area and current status of access.

g. Terms and conditions of right-of-way agreements and easements for area involved.

h. Condition and status of cadastral surveys in area.

i. Status of inventories for or occurrence of sensitive, threatened, or endangered plants and animals; status of inventories of cultural resources.

j. Notification requirements of Corps of Engineers under Sec. 404 of Federal Water Pollution control Act if work involves discharge of dredged or fill material in navigable waters; applicability of any general permit issued pursuant to Sec. 404.

k. Applicability of coastal zone management programs pursuant to the Coastal Zone Management Act.

2. Silvicultural Practices. Silvicultural practices must be used that best meet the management goals and related land-use prescriptions and assure prompt regeneration of the forest. Selection cutting, shelterwood cutting, clearcutting or their various modifications are available options.

a. Clearcutting would not be used as a cutting practice where:

(1) Soil slope or other watershed conditions are fragile and subject to unacceptable damage.

(2) There is no assurance that the area can be adequately restocked within 15 years after harvest.

(3) Aesthetic values outweigh other considerations.

b. Clearcutting should be used only where:

(1) It is silviculturally essential to accomplish the relevant forest management objectives.

(2) The size of clearcut blocks, patches, or strips are kept at the minimum necessary to accomplish silvicultural and other multiple-use management objectives. Cutting units should not exceed 40 acres in normal circumstances. More than 40 acres may be appropriate for salvage of an area already environmentally damaged by fire, insect, or wind, or where larger cutting units would minimize road construction and other actions which would result in greater adverse environmental impact on the total forest.

3. Sale Design. Cutting areas should be shaped and designed to blend as much as possible with the natural terrain and landscape. The cutting area should minimize the effect on the total forest vista with due regard for future harvesting, impacts of road construction and other relevant factors.

4. Roads. Roads and other facilities should be kept to a minimum, and where needed to fulfill short and long term management needs, should be located, designed and constructed to the standards

necessary for the total land use and resource values involved.

a. Location of Logging Roads. Roads should be so located to minimize the risk of material entering adjacent streams or other waters.

(1) Road will be fit to the topography so that a minimum alteration of natural features will be necessary.

(2) Roads will be located on stable terrain such as moderate sideslopes or ridgetops wherever possible. When roads must cross potential unstable terrain, the road should be engineered to the extent necessary to prevent unacceptable damage. Where sidecasting of waste material during road excavation will cover the downslope soil with rock and subsoil incapable of supporting productive vegetation, consider end-hauling waste material to stable areas of more moderate topography.

(3) Logging roads will be located away from wet or marshy areas and other wetlands, meadows, riparian areas, and stream banks. Otherwise, necessary drainage and streambank protection would be provided.

(4) The number of stream crossings would be minimized. When it is practical streams would be crossed at right angles to the main channel.

(5) Areas of vegetation would be left or established between roads and streams.

(6) Roads will avoid being located through crucial deer and elk winter range, when feasible.

(7) Roads will avoid being located through non-forest or non-commercial forest habitats with high wildlife values.

b. Road Design. Consistent with good safety practices and intended use, each road will be designed to the minimum-use standards adapted to the terrain and soil materials so as to minimize surface disturbance and damage to water quality.

(1) A flexible design will be to minimize damage to soil and water quality.

(2) Roads will be designed no wider than necessary to accommodate the immediate anticipated use.

(3) Cut and fill slopes would be designed at the normal angle of repose or less.

(4) Culvert out-flow would not be allowed to be discharged onto unprotected fill slopes. Energy dissipaters would be installed at culvert outlets or in half rounds where needed.

(5) Water crossing structures would be designed to provide for adequate fish passage, minimum impact on water quality, and the 25-year frequency storm. Increases in water yield and peak flows resulting from vegetation removal would be kept in mind when designing structures.

(6) Roads will be designed to drain naturally by outsloping and by grade changes wherever possible. Where outsloping is not feasible, use roadside ditches and culverts to drain roads onto undisturbed ground.

(7) Dips, waterbars, and cross-drainage would be provided on all temporary roads.

(8) Drainage diversions would be placed above stream crossings so that water may be filtered through vegetative buffers before entering the stream.

(9) Drainage would be provided where groundwater causes slope instability.

c. Road Construction. Road construction represents a principal source of sedimentation. Limit excavation to the practical, essential amount needed to meet the necessary road standards. Plan for stabilization of soil exposed and for rehabilitation of other environmental damage during construction.

5. Harvest Techniques. Sale layout planning will include planning for use of harvest systems that minimize damage to the site and to reserve trees and provide maximum protection from fire, insects, disease, wind, rodents and other hazards.

a. Felling. Directional felling systems would be used where needed to minimize site damage; to protect streams, buffer strips, riparian areas, cultural sites, or reserved timber (including wildlife trees); or to increase timber utilization.

b. Logging Systems. Logging systems that least disturb the soil mantle and stream side buffer strips are preferred to those methods that contribute to soil movement.

c. Landings. Landings will be of minimum size commensurate with safety and equipment requirements and located on stable areas so as to minimize the risk of material entering adjacent streams and waters. Landings should be located on firm ground above the high-water level of any stream. Landing locations on unstable areas, on steep side hill areas or areas which require excessive excavation should be avoided.

6. Soil Protection. Preserving the upper soil strata for the subsequent growing of future forest crops depends in large part on the care, planning, and

professional judgement exercised in sale layout. No more than 12 percent of the area would be allowed to become compacted.

a. Protection of Watershed. Each sale will be planned to reduce to a minimum the amount of soil erosion resulting from road construction, logging, or slash disposal commensurate with practical logging procedures and reasonable costs.

b. Revegetation. Prompt planning will be undertaken for revegetation of roadway cut and fill slopes and other areas where soil has been seriously disturbed and constitutes an erosion and sedimentation hazard. Revegetation and erosion prevention measures may include mulching, seeding to grass or legumes, forbs, planting of rapid-growth species of plants, seeding or planting of trees, hydromulching and other appropriate soil stabilization practices.

7. Protection of streams, wetlands-riparian areas, and other waters. When planning operations along streams, lakes, bogs, swamps, marshes, wet meadows, springs, seeps or other sources where the continuous presence of water is indicated, protect soil and vegetation from disturbances that could cause adverse effects on water quality and water quantity, wildlife and aquatic habitat. Special consideration will be given around sources that supply domestic water. Use streamside buffer strips along perennial and intermittent streams to reduce the quantity of sediment and logging wastes that might reach the stream, to help prevent stream water temperature increases, and to protect aquatic life, riparian zones and natural streamside beauty. Review decisions concerning management of riparian areas and wetlands made during the planning process regarding management objectives, vegetative composition, planned management actions, etc. If guidelines for marking buffer strips are not listed in the planning documents, the following guidelines should be observed:

a. Leave all hardwood trees critical to stream protection and shrubs, grasses, rocks and natural "down" timber which afford shade over a perennial stream or maintain stream bank protection. Where insufficient nonmerchantable tree species exist to provide up to a minimum 75% of original shade over the stream, a fringe of undisturbed merchantable trees may be required. These trees are also the future source of large woody debris for the stream and riparian areas.

b. All natural-occurring, large woody debris and tree boles should be left in the stream to provide habitat structure, unless blocking migrations of fish or recommended for removal by a hydrologist or biologist.

c. Neither an optimum nor a minimum width can be arbitrarily established for buffer strips. The necessary width varies with steepness of the terrain, the nature of the undercover, the kind of soil, the size of the stream, the width of the riparian area, and the amount of timber that is to be removed.

d. For effective filtering of sediment, buffer strips should be wide enough to entrap the material that erodes from upslope road construction or from adjacent logging areas. Under some conditions, and with careful control in adjacent logging areas, a relatively narrow buffer strip may suffice. On the other hand, where excessive soil movement may occur, the buffer strip may have to be much wider and other precautions will have to be taken to eliminate adverse effects on the stream water quality.

e. A modification of the buffer strip plan may involve removal of some merchantable trees from buffer strips as decided by an interdisciplinary team during sale planning. Buffer strips may be protected by leaving stumps high enough to prevent upslope trees from rolling or sliding through the strips into the streams, by parallel felling, or by tree pulling or jacking.

f. Where timber should be removed because it would be subject to excessive windthrow and where it is difficult to leave an adequate buffer of timber to shade and protect the stream, plan to reestablish cover along the stream after cutting is completed. Fast growing deciduous species or other suitable vegetation may be required to restore shade as quickly as possible. Leave understory vegetation as undisturbed as possible to filter runoff and help stabilize the soil.

g. Intermittent streams in some areas may, during the wet season, produce enough flow to provide spawning areas for trout or anadromous fish and to carry silt loads to perennial streams. Intermittent streams with this potential will receive consideration with perennial streams for use of buffer strips.

8. Wildlife Considerations. Special care will be taken during sale layout planning to protect or preserve important wildlife and aquatic habitat. Identified crucial habitats may include big game winter ranges, migration routes, calving ground, strutting ground, nesting areas, and riparian zones. However, certain habitat considerations must be a part of every sale layout plan.

a. Legislated Action. Positive action will be taken to preserve sensitive threatened or endangered species and their habitat, in accordance with the mandates of the Endangered Species Act of 1973, the Bald Eagle Protection Act of 1940, Sikes Act of 1960, and existing Bureau policy.

b. Wildlife Tree (Snag) Management. Evenly distributed management will be provided for cavity dwellers on managed forest lands without creating logging safety hazards and without violating the decisions on which the allowable cut plan is based. Maximum use should be made of existing withdrawals to manage snags. These areas can be managed to contribute to the snag requirement while recently cut units may contain few or no snags. To meet the snag policy, wildlife trees/snags will be retained, as feasible, on each acre of managed forest land. Snag management in areas that are devoid of snags, or have limited existing snags, may require that an adequate number of green trees or culls be left per acre to maintain a viable population level of cavity dependent wildlife.

Specific wildlife tree/snag diameters (DBH) to be retained will be based on wildlife species requirements. When snag management is not directed at specific species habitat requirements, then wildlife tree/snag diameter selection should be divided approximately equally between snags 25 inch DBH and larger ranging to 50 feet in height and snags 10-25 inches DBH over 6 feet in height. In all cases leave all the soft snags and the largest available hard snags when a choice exists. In selecting wildlife trees, give special attention to snags and culls exhibiting heart rot, broken tops, external fungal conks, dead branch stubs, and signs of existing wildlife use.

c. Down Log Management. Provide at least 5 to 10 down logs per acre on lands in the intensive forest base. Each log should have a minimum dimension of 12"-17"x20'. Meeting this goal should not be difficult under normal circumstances because clearcut units usually contain more material meeting the size requirements.

d. Opening (Forages)/Cover Ratio. Evaluate the opening (forage) and cover ratio in a proposed timber sale area when the sale involves big game habitat. Consult a wildlife biologist to determine how to obtain maximum benefits of timber harvest on the maintenance of optimum forage/cover ratios on deer and elk summer and winter ranges.

On land currently unsuited for the production of wood fibre, such as lakes, bogs, springs, swamps, wet meadows, or grasslands, strive to maintain thermal, hiding and survival cover for wildlife species.

Clearcutting operations will be planned so that adequate wildlife escape cover is available within one-eighth mile.

e. Access. The effect of accessibility and human disturbance on wildlife will be considered in road location and design. Closure of unneeded roads would take place upon completion of logging and, if necessary, seasonal closures of operations would take place during critical wildlife periods. The cumulative effects of the road transportation network will be considered on key areas that are crucial for big game winter survival and fawning/calving habitat.

9. Cultural Resources. Special consideration must be given during sale layout to protection and preservation of cultural resources as required by the Antiquities Act of 1906 and the National Historic Preservation Act of 1966.

10. Utilization, Slash Disposal and Site Preparation. Consideration of the following will be included in the sale planning efforts:

a. Utilization. Complete utilization is encouraged of all harvested trees, including marginal and non-commercial species. Each forest products sale will provide opportunity for maximum use of all timber or other vegetative resources sold and to prevent destruction of unused materials provided that such utilization is consistent with wildlife requirements.

b. Slash Disposal and Site Preparation. To achieve fire hazard reduction, and to provide for reforestation and other intensive forest management opportunities, full consideration must be given at time of sale planning to the desirability and method of slash disposal and site preparation. Factors to be considered include but are not limited to utilization of material, removal of debris, smoke management, fire protection, watershed protection, soil compaction, nutrient loss, wildlife habitat requirements, animal damage, and reforestation requirements.

11. Reforestation. Each sale plan must include plans for prompt reforestation of the sale area after completion of the timber harvest operation by natural or artificial means.

12. Other Vegetative Resources. Preparation for sales or other vegetation resources or for small sales of minor forest products may be somewhat less detailed than preparation for a regular timber sale. As a minimum, consider the following:

a. Opportunity for sale and potential competitive interest.
b. Land use plans and multiple-use relationships in the area, including MFP recommendations and decisions.
c. EA for proposed action.
d. Access to area.
e. Land Status.
f. Property Lines.
g. Effect of sale on other forest products.
h. Protection of reserved resources.

i. Site protection.
j. Erosion control.
k. Preservation of water quality.

II. Sale Layout

1. Plan. Prepare a layout plan after on-the-ground inspections of the sale area. Incorporate all applicable considerations listed in Section I, above, in the layout plan. The planned sale layout should be depicted on aerial photos and maps of the area, as best suited to the situation, with accompanying narrative.

2. Logging System. The layout plan must reflect selection of the optimum logging systems, taking into consideration the topography, size of cutting area, road locations, silvicultural prescriptions for the sale area, size of timber, location of protection areas and damageable sites, other multiple-use factors and harvest plans for removal of timber from adjacent reserved areas.

3. Road and Boundary Locations. On aerial photos or maps, show the following:

a. Location and boundary of clear-cut areas, partial cuts areas, special cutting areas and special yarding areas.

b. Location of reserve areas or reserved trees.

c. Location of property boundaries.

d. Location of mainline roads, logging spur roads and landing areas.

4. Supervision. Sale layout, in accordance with the layout plan, will be done by or under the supervision of a professional forester and in consultation with other disciplinary expertise. The marking and designation of cutting areas is a complex assignment, requiring the best effort of experienced forestry personnel. Most sale layout involves completion of plans and consideration for the following items:

a. Location and identification of corners, corner monuments and property lines.

b. Mainline roads, spur roads, landings and road improvement work located, surveyed, or designed and staked and locations referenced.

c. Rights-of-way boundary involving new road construction blazed or painted and posted through timber areas.

Fire Management

1. Fuel mapping will be based on northern forest fire lab fuels models.

2. All planned/prescribed burns will have specific, measurable objectives. Objective monitoring will be the responsibility of the benefitting activity.

3. Pre-treatment and post-treatment monitoring of the five (5) major soil nutrients (N,P,K,Ca,Mg) will occur on all planned/prescribed burns. Post-treatment monitoring will occur after the second (2) and fifth (5) growing season.

4. Prescribed burns will not be conducted when soil moisture is below sixty (60) percent.

5. Fire management activities will be conducted so that surface disturbance is minimized. Tractor fire trails will not be allowed in the planning area unless approved by the Area Manager.

6. Cultural resource protection will be the first priority of the area fire management program.

7. High value resource areas, developed areas, and areas where fire might pose a life threatening situation will be protected through intensity of attack.

8. All burn areas will receive at least two (2) years of post-fire rest from livestock grazing. If resource objectives have still not been met, then additional rest will be prescribed.

9. Planned/prescribed burn areas will receive a minimum of two (2) growing seasons pre-fire rest from livestock grazing to build fuels so that resource objectives can be met.

10. All unplanned ignitions will have post-burn review and evaluations in order to define appropriate multi-resource rehabilitation.

Recreation Sites

1. Project work undertaken within recreation sites would be designed and constructed to fit general layout and themes of site.

2. Project work undertaken near recreation sites would be designed and constructed with an adequate buffer to provide for protection of scenic values of recreation site will be established.

Visual Resource Management (VRM)

1. Class I—Primarily for WSAs, RNAs, ACECs, ONAs, and Wild & Scenic Rivers. No projects will be allowed within these areas.

2. Class II—Primarily for areas of high scenic quality. Any project work within a Class II area

cannot be visible to a casual visitor from any travel route.

3. Class III—Primarily for areas considered important from an aesthetic view point. Not necessarily outstanding scenery. Project work can be seen within a Class III area from travel routes. However, projects cannot be a focal point on the landscape.

4. Class IV—Primarily for general scenic landscapes throughout much of BLM. Project work within a Class IV area can be a focal point on the landscape to the casual visitor.

5. Class V—Primarily for sites requiring reclamation (landfills, timber cuts, mining operations, etc.). Project work within these areas is virtually unrestricted VRM guidelines.

Cultural Resources

Management of cultural resources emphasizes protection and preservation. To meet these objectives, the Department of Interior has issued instructions setting forth preservation and protection guidelines. In accordance with the National Historic Preservation Act of 1966, as amended, Executive Order 11593 and BLM policy, appropriate measures (such as inventory and existing data review) would be taken to identify, protect, preserve and determine the significance of cultural properties prior to implementation of any project or plan. Prior to any activity plan or project that may adversely affect these properties, the appropriate State Historic Preservation Office (SHPO) would be consulted in the determination of effect upon the cultural property. For any site within the project area determined eligible for the National Register of Historic Places, and determined to be adversely effected by the activity plan or project, mitigation measures would be undertaken. Appropriate mitigating measures and evaluation of effect on properties are determined in consultation with the State Historic Preservation Officer and National Advisory Council on Historic Preservation. Usually project or plan re-design (location or method) would be employed where practical. Mitigation measures may include, but are not limited to, the following: 1) adjusting project boundaries to avoid impacting sites; 2) intensive documentation of the cultural resource before proceeding with project implementation; 3) adopting methods or techniques that would minimize direct and indirect disturbance to the site and its environmental setting; 4) removing and relocating historic cultural properties to another location after documentation and development of a management plan to maintain the values of the property; or 5) excavating the archaeological properties with the goal of preserving the values of the properties.

The inventory or mitigation would be directed by cultural resource specialists or through contracts with individuals or institutions meeting professional standards. Management plans would be developed for all National Register properties and others determined to need comprehensive management.

Special stipulations in contracts and leases, and acknowledgement of mining notices will be included to protect undiscovered or sub-surface cultural resources not identified during inventory. In all cases, cultural resources discovered during an operation or activity on BLM land will be left intact and operations in the area suspended. Operations will not be resumed until written permission is received from the authorized officer. Cultural resources will be evaluated and protected in accordance with procedures under 36 CFR 800 and legislated requirements, including consultation with the State Historic Preservation Officer in the determinations of eligibility and effects.

Special stipulations on fuelwood (firewood cutting) permits: Standing dead trees within 100' of any historic building or structural remains (for example cabins, barns, outbuildings, historic mining structures) must be felled away from the structure or remains.

See also Timber Harvest (item 9), Fire Management (item 6), Locatable Mineral Development (Item A2e, citing the 43 CFR 3809 regulations.

Wildlife

No action will be taken by the BLM that could jeopardize the continued existence of any federally listed threatened or endangered plant or animal species. The U.S. Fish and Wildlife Service will be consulted regarding actions that affect habitat of these species. State sensitive species will be given the same management considerations as though they were officially listed pursuant to the Endangered Species Act of 1973.

Consultation with the Oregon Department of Fish and Wildlife will be accomplished on major construction, and/or surface disturbing activities in high value wildlife areas.

Vegetation manipulation and revegetation projects in crucial wildlife areas would be done in irregular shape and to create a vegetation mosaic.

All areas where major vegetation manipulation or conversion occurs will be totally rested from livestock grazing for at least two growing seasons following treatment.

Wildlife escape devices will be installed and maintained in water troughs.

BLM will not do any action that would reduce minimum flow below instream flow recommended by ODFW on Class I fishable streams.

In crucial wildlife habitats major construction and maintenance work will be scheduled to avoid or minimize disturbance to wildlife. Areas disturbed during project construction will be reseeded with a mixture of grasses, forbs and shrubs to meet site specific needs or habitat requirements. All new fences will be built to standard Bureau wildlife specifications.

Appendix H Section 15 Lease Data

Allotment Number	County	BLM Acres	Grazing Preference
0	ASO	969	99
	GAR	40	4
	MOR	518	51
	UMA	2959	297
	UNI	971	97
	WAL	2182	211
1	UNI	600	60
2	UMA	40	4
3	ASO	2335	238
	WAL	210	21
4	WAL	729	73
5	MOR	474	47
6	MOR	160	0
	UMA	80	0
6213	UNI	160	16
6217	UNI	40	4
6501	UNI	440	44
6502	WAL	320	21
6503	ASO	19	2
	WAL	143	13
6504	WAL	600	28
6505	WAL	80	3
6506	ASO	280	40
	WAL	40	6
6507	ASO	239	34
6508	UMA	40	5
6509	WAL	40	7
6510	ASO	69	10
6512	WAL	160	24
6513	WAL	120	12
6514	ASO	178	11
6515	WAL	38	5
6516	ASO	210	30
6517	ASO	166	30
6518	WAL	435	72
6519	WAL	72	18
6520	WAL	96	11
6522	UNI	80	13
6523	UMA	320	17
6524	UNI	240	24
6525	WAL	40	7
6526	MOR	39	8
6527	UMA	320	13
6528	UNI	40	8
6529	UMA	160	13
6531	UMA	627	63
6532	MOR	40	4
	UMA	1100	106
	UNI	160	16
6533	UMA	40	6
6535	WAL	80	4
6536	ASO	459	55
6538	UNI	160	22

Allotment Number	County	BLM Acres	Grazing Preference
6539	ASO	120	17
6540	UNI	120	12
6541	ASO	40	5
6542	WAL	442	47
6543	WAL	607	72
6544	ASO	1025	86
	WAL	947	78
6545	WAL	160	16
6546	WAL	390	58
6548	WAL	120	19
6549	MOR	260	26
	UMA	50	5
6550	UNI	120	7
6551	WAL	456	48
6552	ASO	40	8
6553	ASO	88	7
6554	ASO	508	45
6555	UNI	360	40
6556	WAL	160	42
6557	WAL	280	19
6558	UMA	730	67
6559	WAL	360	54
6560	MOR	280	35
6561	UMA	170	27
6562	WAL	57	8
6564	ASO	634	91
	WAL	1935	271
6567	ASO	261	59
	WAL	321	73
6568	UMA	80	16
6569	UMA	1010	199
6570	UMA	80	4
6571	WAL	440	44
6572	ASO	179	14
	WAL	143	12
6574	WAL	440	67
6575	WAL	520	24
6576	ASO	349	40
	WAL	40	4
6577	WAL	920	140
6578	WAL	440	42
6579	UMA	280	12
6582	WAL	80	9
6583	WAL	120	9
6585	WAL	280	35
6586	UNI	40	6
6587	UMA	8	2
6588	UMA	279	44
6589	UNI	120	24
6591	WAL	80	16
6592	ASO	901	71
	WAL	40	3
6593	GAR	30	4

Allotment Number	County	BLM Acres	Grazing Preference
	WAL	50	8
6594	WAL	375	9
6595	MOR	120	15
6596	WAL	400	20
6597	UNI	80	8
6598	UNI	1000	50
6600	UMA	160	22
6602	ASO	212	16
6603	ASO	1395	106
6604	WAL	40	5
6606	UNI	120	11
6607	UMA	3710	287
6608	WAL	80	16
6609	ASO	120	12
6611	UNI	40	6
6612	WAL	682	87
6613	UNI	200	12
6614	UNI	240	18
	WAL	27	3
6615	UMA	40	6
6616	WAL	200	18
6617	WAL	160	31
6618	UMA	415	39
	UNI	80	7
6619	MOR	40	6
6620	MOR	63	9
6621	WAL	80	7
6623	WAL	40	7
6624	UNI	80	16
	WAL	412	81
6625	UNI	440	30
6626	UMA	480	84
6628	MOR	334	34
6629	UNI	188	22
6631	WAL	160	27
Totals		**50397**	**5349**

Lease Numbers
0=Unleased
1=Admin. by USFS
2=Admin. by Burns Dist.
3=Agreement, Wash. St. Game Dept.
4=Agreement, Ore. St. Game Dept.
5=Admin. by Prineville Dist.
6=Special Land Use Permits

Appendix I Land Tenure Adjustment

Public lands in the Baker planning area will be classified in three land tenure zones.

- Public lands in Zone 1 (retention zone) are lands that will be generally retained in federal ownership. No sales would be conducted in this zone, however exchanges may be considered to acquire other Zone 1 lands which would enhance resource management programs or improve public services.

- Public lands in Zone 2 (Unclassified) are lands for which information on resource values is lacking. These lands may be placed in Zone 1 areas depending on future resource information (see Table I-1).

- Public land in Zone 3 (Disposal) are lands that meet the sale criteria, of which may be used in exchange to acquire lands in Zone 1 to enhance resource management programs or improve public service (see Table I-2).

The land tenure adjustment criteria are common to all alternatives and are identified to assist in categorizing the public lands for retention, disposal or further study. Criteria are also provided to facilitate the selection of lands to be received in exchanges or other types of acquisition. The criteria range from specific to general and are designed to provide direction for resource area wide consistency while allowing the manager flexibility in identifying circumstances which dictate the category in which lands can be placed.

These criteria involve a mixture of diverse resource program thrusts that will allow the Baker Resource Area of the Vale District to focus attention in the retention zone, where maximum fiscal operational efficiencies and public benefits can be accomplished. These program thrusts are summarized and outlined as follows:

- Retain and manage the BLM administered public lands in the retention zone and lands in the unclassified zone as information is obtained that indicates these should become a part of the retention zone. Exchanges of land in the retention Zone 1 may be made to acquire other Zone 1 lands which would enhance resource management programs or improve public service.

- Continue the existing land exchange program, with the goal of consolidating the BLM administered landownership within the retention zone.

- Continue entering into any practical cooperative management agreements with other federal and state governmental agencies. The goal here is to manage the scattered and isolated parcels situated outside designated management areas in the most efficient manner.

- Continue to subject public land parcels in the unclassified and disposal zones to exchange following site-specific environmental analysis of each parcel.

- Continue cooperating with other federal, state, and local governmental agencies, as well as appropriate private organizations, in development of needec recreation and other public purpose projects.

In addition to this policy, additional criteria that will be used in categorizing this public land for either retention or disposal, or requiring further study, as well as identifying acquisition opportunities and priorities, are summarized below. This list is not considered all-inclusive, but it represents the major factors that will be evaluated. The criteria that will be used include the following:

- public resource values that will benefit and enhance the range management, wildlife habitat, watershed, recreation, forestry, mineral, cultural resource, endangered, threatened, or sensitive plant and animal, and wilderness programs;

- access to public lands should be enhanced by the BLM acquiring key tracts or easements that would assure the public legal access to blocks of public lands. Improved access will generally increase recreational use in areas where a intermingled ownership pattern now restricts public use;

- amount of public monetary investments in facilities or improvements on the public land and the potential for recovering those investments;

- difficulty or costs in time and money in the effective managerial administration of the lands;

- suitability or desirability of the land for management by another governmental agency;

- significance of any subsequent land use decisions in stabilizing, enhancing, or hindering existing or potential businesses, social and economic conditions, and/or life-styles;

- need for future mineral development;

- encumbrances to the land, including, but not limited to, Recreation and Public Purposes and small tract leases and other leases and permits, rights-of-way, and withdrawals;

- consistency of the decision with cooperative agreements and plans or policies of other agencies.

- suitability and need for change in landownership or use for purposes including, but not limited to, community expansion or economic development, such as residential, commercial, industrial, or agricultural (other than grazing) development; and

- state and local governmental requests and recommendations for retention or disposal of BLM administered public land.

Lands that fail to clearly meet either the retention or disposal criteria, will. Lands in this category will include:

- lands where disposition would pose questions as to consistency with other Federal, state, local government or tribal land use plans.

- lands under withdrawal review;

- lands where less than full fee conveyance would reserve specifically identified significant public values to protect public interests.

- lands where management is not cost-effective, but not clearly negative, and multiple use values are marginal.

- lands where cooperative management best serves the public interest.

- lands with potential for future public use—based on developing needs.

- lands with potential for transfer under the Good Neighbor program.

- lands in areas of public access deficiencies.

Generally public land within the retention zone (see maps 1 and 7) will remain in public ownership and continue to be administered by the Bureau of Land Management. Transfers to other agencies will continue to be considered where additional public benefits will be derived or where improved management efficiency will result. Any site-specific adjustment decisions will be based on the application of the criteria stated above, and each situation will be evaluated on its own merits.

Public land to be sold must meet at least one of the criteria cite in Section 203 (a) of the Federal Land Policy and Management Act: (1) such tract because of its location or other characteristics is difficult and uneconomic to manage as part of the public lands, and is not suitable for management by another Federal department or agency; or (2) such tract was acquired for a specific purpose and the tract is no longer required for that or any other Federal purpose; or (3) disposal of such tract will serve important public objectives, including but not limited to, expansion of communities and economic development, which cannot be achieved prudently or feasibly on land other than public land and which outweigh other public objectives and values, including, but not limited to, recreation and scenic values, which would serve by maintaining such tract in Federal ownership.

Public land will only be sold when the following criteria are met: (1) it is required by national policy; (2) it will achieve disposal objectives on a timely basis and where disposal through exchange would cause unacceptable delays; (3) it is determined that disposal through exchange is not feasible; or (4) it is required to facilitate title clearance.

The preferred method of selling public land would be by competitive sealed bidding by qualifying purchasers. However, modified competitive bidding or direct sale procedures may be used when necessary to void jeopardizing an existing use on adjacent land or to avoid dislocation of existing public land users. No land will be sold for a monetary amount less than fair market value, as determined by appraisal.

Public lands to be exchanged must meet the criteria established by Sections 102, 205, and 206 of the Federal Land Policy and Management Act. The following land exchange criteria are designed to provide consistent direction, while allowing the line manager flexibility to meet local, state and national needs. All proposals will be evaluated to determine if the selected lands will:

- facilitate access to areas retained for long term public use.

- enhance Congressionally designated areas, rivers or trails.

- be primarily in the "retention" areas. Acquisition in "Further Study" areas or "disposal" areas will only be considered if the action leads to and/or facilitates long term needs or program objectives.

- facilitate national, state and local BLM priorities or mission statement needs.

- stabilize or enhance local economies or values.

- meet long term public land management goals as opposed to short term.

- be of sufficient size to improve use of adjoining lands, or if isolated, large enough in scale to allow the identified potential public land use.

- allow more diverse use, more intensive use, or a change in uses to better fulfill the Bureau's mission.

- maintain or enhance important and recognized public land values. Especially noteworthy are identified, designated, special or high interest value areas.

- enhance the opportunity for new or emerging public land uses or values.

- contribute to a wide spectrum of uses or large number of public land users.

- facilitate management practices, uses, scale of operations or degrees of management intensity that are viable under economic program efficiency standards.

- secure for the public significant water related land interests. These interests will include lake shore, river front, stream, pond or spring sites.

The following major land transfer actions are listed in their order of preference:

1. State Lieu and State Grant selections,

2. State Exchanges,

3. Private Exchanges,

4. Recreation and Public Purpose patents,

5. BLM/US Forest Service jurisdictional transfers (These are jurisdictional transfers usually involving limited acreages; it does not refer to the proposed BLM/Forest Service interchange that is presently under consideration.),

6. Withdrawals for other federal agencies,

7. Public sales,

8. Indian allotments, or

9. Desert land entries.

Table I-1 Potential Land Disposal Tracts in Zone 2

Description	Acreage
Umatilla County Unclassified	
T. 3 N., R. 27 E.	
Sec. 2: SE SE	40.00
12: S SE	80.00
24: SW	160.00
T. 2 N., R. 28 E.	
Sec. 10: NW SW	40.00
28: E E	160.00
T. 5 N., R. 28 E.	
Sec. 26: W NW SW, SW SW, N SE SW	80.00
28: E E	160.00
32: W NE	80.00
T. 5 N., R. 29 E.	
Sec. 22: SW NW	40.00
T. 4 N. R. 37 E.	
Sec. 4: Lot 4	48.22
T. 3 S., R. 30 E.	
Sec. 24: SW SE	40.00
T. 3 S., R. 30 E.	
Sec. 25: Lot 3	22.52
36: Lots 1,2,3,4	91.74
T. 3 S., R. 31 E.	
Sec. 17: S SW	80.00
T. 4 S., R. 31 E.	
Sec. 26: SW SE	40.00
28: W NE	80.00
T. 2 S., R. 33 E.	
Sec. 19: Lots 4 & 16	74.27
Asotin County Unclassified	
T. 6 N., R. 44 E.	
Sec. 10: SE NE, NE SE	80.00
11: NW SW	40.00
15: Lots 1 & 4	70.78

Description	Acreage
Wallowa County **Unclassified**	
T. 6 N., R. 44 E.	
Sec. 14: Lots 2, 3 & 4	54.79
T. 1 N., R. 45 E.	
Sec. 1: Lot 7	8.12
2: Lot 6	3.62
T. 1N., R. 45 E.	
Sec. 35: Lots 1, 2 & 3	3.53
T. 2 N., R. 45 E.	
Sec. 36: SW NE	40.00
T. 3 N., R. 45 E.	
Sec. 35: NW NW	40.00
T. 5 N., R. 45 E.	
Sec. 1: Lot 1	40.00
10: NE SE , SW SE	80.00
T. 1 N., R. 46 E.	
Sec. 9: NE SE	40.00
T. 2 N., R. 46 E.	
Sec. 6: Lot 10	26.58
30: Lot 7	14.79
T. 3 N., R. 46 E.	
Sec. 34: SE NW	40.00
T. 2 N., R. 47 E.	
Sec. 17: SW SW	40.00
26: NE SW , N SE	120.00
27: SE NW	40.00
31: Lots 8, 11 & 18	1.80
T. 1 N., R. 48 E.	
Sec. 6: SE SE	40.00
17: SW NW	40.00
18: SE NE , W SE	120.00
T. 2 N., R. 48 E.	
Sec. 20: NW	160.00
21: SW NE , NE NW , NE SW , SW SE	160.00
28: NW NW , SW , SW SE	240.00
34: SE SW	40.00
T. 1 S., R. 46 E.	
Sec. 8: NE NW	40.00
23: SE SW	40.00

Description	Acreage
T. 2 S., R. 46 E.	
Sec. 10: NW SE	40.00
23: NE SE	40.00
24: SE NE	40.00
T. 1 S., R. 47 E.	
Sec. 3: Lot 13, SW SW	80.00
16: SE NE , SE SW , NE SE , S SE	200.00
17: NE SW	40.00
30: Lot 4	34.73
31: Lot 1	34.68
32: NE SE	40.00
33: NE NE	40.00
Morrow County **Unclassified**	
T. 3 S., R. 23 E.	
Sec. 31: Lots 2, 3, 4, E SW , W SE , SE SE	354.10
32: SW SW	40.00
T. 1 S., R. 24 E.	
Sec. 24: Lot 2	39.81
T. 2 S., R. 29 E.	
Sec. 1: NW SE	40.00
T. 4 S., R. 29 E.	
Sec. 3: Lots 1, 2, 3, & 4	61.96
4: Lots 1 & 2	32.00
T. 4 N., R. 26 E.	
Sec. 8: S NE , N SW	160.00
T. 5 N., R. 27 E.	
Sec. 20: Unlotted portion the NW SW	18.00
Union County **Unclassified**	
T. 1 N., R. 41 E.	
Sec. 19: SE SE	40.00
T. 4 S., R. 39 E.	
Sec. 29: N NW	80.00
T. 5 S., R. 39 E.	
Sec. 1: NE SW	40.00
3: NE SE	40.00
14: NE NE , W SE	120.00
T. 5 S., R. 40 E.	
Sec. 15: NW NW , NE SW	80.00
22: SW NE	40.00

Description	Acreage
T. 6 S., R. 40 E.	
Sec. 3: SW NE	40.00
13: SW NE	40.00
26: Lot 1	40.87
T. 6 S., R. 41 E.	
Sec. 20: SE NW	40.00
21: E NW	80.00
28: NE NW	40.00
30: Lot 3	40.80
34: NW NE	40.00

Baker County
Unclassified

T. 12 S., R. 37 E.	
Sec. 13: SE NW , NE SW	80.00
14: SE NE , E NW	120.00
T. 13 S., R. 37 E.	
Sec. 5: S NE	80.00
9: NE NE	40.00
T. 12 S., R. 38 E.	
Sec. 2: Lot 2, SW SE	79.53
4: Lot 3	40.73
T. 13 S., R. 38 E.	
Sec. 19: E SE	80.00
20: W SW , NE SW , NW SE	160.00
T. 14 S., R. 38 E.	
Sec. 4: Lot 3, SE NW	80.44
T. 7 S., R. 39 E.	
Sec. 26: W SE , SE SE	120.00
35: N NE	80.00
T. 10 S., R. 39 E.	
Sec. 13: W NE , SE NW , W SW , SE SW	240.00
14: SE SE	40.00
33: SW SW	40.00
T. 11 S., R. 39 E.	
Sec. 2: Lots 1 & 2	70.17
31: Lot 3	33.37
T. 12 S., R. 39 E.	
Sec. 5: Lot 1, SE NE	72.48
T. 12 S., R. 40 E.	
Sec. 28: NW SW	40.00
29: SE SW	40.00

Description	Acreage
T. 7 S., R. 41 E.	
Sec. 7: Lots 1 & 2	74.30
T. 8 S., R. 41 E.	
Sec. 7: Lot 4	39.34
9: W SE	80.00
19: N NE	80.00
28: N SE	80.00
T. 9 S., R. 41 E.	
Sec. 24: NW SW	40.00
T. 12 S., R. 42 E.	
Sec. 13: Portions of Golden Horseshoe Lode, Freegold #4 Lode, CKC Lode	32.02
24: Portions of Mary Lode, Freegold #1, #2, #4 Lodes	44.22
T. 11 S., R. 43 E.	
Sec. 35: NE SW	
36: N	
T. 12 S., R. 43 E.	
Sec. 18: Lots 7, 9, 10, 11 & 12, Little Bess Lode, Freegold –8 and portions of Golden Horsehoe, Freegold –4 & –5	137
19: Freegold –3, portions of Freegold –2 and Mary Lode	40
T. 9 S., R. 44 E.	
Sec. 27: NW NW	40.00
T. 12 S., R. 44 E.	
Sec. 31: Lots 2, 3, & 4	130.62
T. 11 S., R. 45 E.	
Sec. 12: S NE , N SE	160.00
T. 14 S., R. 45 E.	
Sec. 19: SW NE , W SE	120.00
30: N NW NE	20.00
. 7 S., R. 46 E.	
Sec. 25: E E , NW NE	200.00
36: E NE , NE SE	120.00
T. 11 S., R. 46 E.	
Sec. 7: Lots 1, 2, 3 & 4, E SW , N SE	320.96
T. 7 S., R. 47 E.	
Sec. 30: Lots 1, 2, 3, & 4	166.48
31: Lots 1 & 2	82.40

Table I-2 Potential Land Disposal Tracts in Zone 3.

Description	Acreage
Umatilla County Disposal	
T. 4 N., R. 28 E.	
Sec. 14: A portion of S SE SW	7.47
T. 5 N., R. 28 E.	
Sec. 34: S SW NW	20.00
T. 5 N., R. 29 E.	
Sec. 34: NE NE	40.00
T. 5 N., R. 30 E.	
Sec. 4: SE NE	40.00
10: S	320.00
11: E W	160.00
13: SE	160.00
T. 5 N., R. 31 E.	
Sec. 2: Lot 3	34.50
8: SW SE	40.00
T. 6 N., R. 31 E.	
Sec. 17: Lot 3	37.05
T. 6 N., R. 32 E.	
Sec. 15: Lot 4	40.09
T. 3 N., R. 36 E.	
Sec. 14: E SW , NW SE	120.00
23: NE NW	40.00
T. 1 S., R. 30 E.	
Sec. 8: SW NE	40.00
T. 4 S., R. 30 E.	
Sec. 9: SW SE	40.00
T. 6 S., R. 30 E.	
Sec. 33: SW NE	40.00
T. 2 S., R. 31 E.	
Sec. 12: NE NE	40.00
T. 5 S., R. 31 E.	
Sec. 6: SE NE	40.00
T. 6 S., R. 31 E.	
Sec. 29: SE SW	40.00
T. 2 S., R. 33 E.	
Sec. 4: Lot 2	3.05
5: Lots 10, 11 & 13	33.46
9: Lots 5 & 8	31.61
11: Lot 3	2.08
13: Lot 6	11.63
T. 5 S., R. 33 E.	
Sec. 19: SE NW	40.00
30: SE NW	40.00
T. 2 S., R. 34 E.	
Sec. 13: Lot 5	5.07
Asotin County Disposal	
T. 7 N., R. 44 E.	
Sec. 12: W NW , NW SW	120.00
T. 7 N., R. 45 E.	
Sec. 28: SW NE	40.00
T. 7 N., R. 46 E.	
Sec. 2: NW SE	40.00
11: SW NE	40.00
15: SE SW	40.00
18: NW SE	40.00
19: SE SE	40.00
22: NE NW	40.00
Wallowa County Disposal	
T. 4 N., R. 43 E.	
Sec. 4: NW SE	40.00
10: SE NE	40.00
11: SE SE	40.00
T. 6 N., R. 44 E.	
Sec. 17: Lot 4	19.66
T. 5 N., R. 45 E.	
Sec. 10: SE NW	40.00
11: NE NW	40.00
T. 2 N., R. 45 E.	
Sec. 6: Lot 2	7.19
T. 5 N., R. 46 E.	
Sec. 6: S NE , W SE	160.00
T. 6 N., R. 47 E.	
Sec. 32: SW NW	40.00
33: NE NW	40.00

Description	Acreage
T. 1 N., R. 47 E.	
Sec. 3: SE SW	40.00
9: SE NE	40.00
T. 2 N., R. 47 E.	
Sec. 13: NE NE	40.00
T. 1 S., R. 45 E.	
Sec. 24: SW SE	40.00
T. 1 S., R. 46 E.	
Sec. 1: Lots 3 & 6	90.50
20: SE SE	40.00
28: SE SW	40.00
T. 2 S., R. 47 E.	
Sec. 22: SW SW	40.00
29: SW SW	40.00
Morrow County Disposal	
T. 2 N., R. 27 E.	
Sec. 6: Lot 3	40.00
T. 4 N., R. 25 E.	
Union County Disposal	
T. 4 S., R. 35 E.	
Sec. 4: NE SW	40.00
17: SE SE	40.00
T. 1 S., R. 40 E.	
Sec. 15: NE SW	40.00
T. 6 S., R. 40 E.	
Sec. 24: SW SE	40.00
25: NE NW	40.00
T. 6 S., R. 41 E.	
Sec. 33: SW SW	40.00
36: Lots 1,2,3,4,5,6,7 & 8, NW NE	123.47
T. 6 S., R. 42 E.	
Sec. 30: W NE	80.00
31: Lot 3, excepting that portion in MS 680	30.00
Baker County Disposal	
T. 13 S., R. 36 E.	
Sec. 15: SW NE	40.00

Description	Acreage
T. 13 S., R. 37 E.	
Sec. 27: NW SW	40.00
30: SE NW	40.00
T. 14 S., R. 37 E.	
Sec. 6: Lot 3	37.73
T. 9 S., R. 39 E.	
Sec. 8: Unnumbered Lot	.78
T. 6 S., R. 40 E.	
Sec. 18: Lot 6	10.42
T. 7 S., R. 40 E.	
Sec. 26: NE NE	40.00
T. 9 S., R. 40 E.	
Sec. 26: S NE , E NW , NW NW , N SW , W SE	360.00
27: E NE , SW NE , NE SE	160.00
34: SW NW , W SW , SE SW	160.00
35: NW NE	40.00
T. 10 S., R. 40 E.	
Sec. 1: That part of Lot 1 in the S NE , That part of Lot 2 in the N NE , N SE	240.00
3: That part of Lot 1 in the SW NW , That part of Lot 2 in the NW NW , NW SW	120.37
T. 11 S., R. 40 E.	
Sec. 6: SE NE	40.00
T. 13 S., R. 40 E.	
Sec. 2: Lot 3	40.44
9: SE NW , NE SW , SE	240.00
10: N SW	80.00
T. 7 S., R. 41 E.	
Sec. 1: NW SW	40.00
4: Lots 3 & 4, SE SW , NE SW	160.80
11: SW SE	40.00
12: SW SW	40.00
14: SE NE , NW NE	80.00
23: SE NW	40.00
26: SE NE , E SW , SE	280.00
35: N NE , NE NW , SE NE	160.00

Description	Acreage
T. 10 S., R. 41 E.	
Sec. 9: NE NE	40.00
10: SE SE	40.00
12: S NE , SE SE	120.00
13: NE NE	40.00
14: E NW , NE SW	120.00
15: N SW , SE SW	120.00
16: N SE	80.00
21: NE NE , SE NW	80.00
22: NW NW	40.00
T. 8 S., R. 42 E.	
Sec. 24: E E	160.00
T. 9 S., R. 42 E.	
Sec. 25: S S	160.00
35: SW NE , SE NW , NE SW , NW SE	160.00
T. 10 S., R. 42 E.	
Sec. 6: SW SE	40.00
11: NE SE	40.00
17: SE SW	40.00
18: Lot 1, SE SW , E SE	159.23
T. 11 S., R. 42 E.	
Sec. 3: NW SW	40.00
4: S NE	80.00
8: SW NW	40.00
T. 8 S., R. 43 E.	
Sec. 19: Lots 1, 2, & 3, W NE , E NW , NE SW , NW SE	381.15
30: Lots 2, 3, & 4, E SW , W SE , NE NE	337.50
29: W NW , NW SW	120.00
T. 9 S., R. 43 E.	
Sec. 15: SW SE	40.00
22: NW NE	40.00
30: Lot 3	38.27
31: N NE	80.00
32: SW NW , NW SW	80.00
T. 10 S., R. 43 E.	
Sec. 3: SE SE	40.00
4: N SW , SE SW	120.00
5: Lot 3, SW NE , SW SW , N SE	200.00
11: E SW	80.00
23: SE NE , N SE	120.00
24: NW SW	40.00
26: E NE	80.00
T. 11 S., R. 43 E.	
Sec. 23: N SW , NW SE	120.00
31: SW SE	40.00

Description	Acreage
T. 12 S., R. 43 E.	
Sec. 19: Lot 4	61.27
23: NW SW	40.00
T. 8 S., R. 44 E.	
Sec. 13: SE SE	40.00
15: Lot 3	27.58
21: Lots 1 & 2, Ollie Woodman Lode	26.00
22: Lot 3	10.80
T. 9 S., R. 44 E.	
Sec. 23: SE NW , S SE	120.00
24: SE NE	40.00
26: NW NE , SW SE , E SE	160.00
27: NW SE	40.00
31: E SW , NW SE	120.00
34: SW SE	40.00
T. 10 S., R. 44 E.	
Sec. 2: SW SW	40.00
3: NW SE	40.00
6: Lots 3 & 4	77.21
18: Lots 2 & 3	77.39
T. 11 S., R. 44 E.	
Sec. 19: Lot 1	9.70
33: SE SW	40.00
T. 8 S., R. 45 E.	
Sec. 28: W W SE SW	10.00
T. 9 S., R. 45 E.	
Sec. 19: Lots 2, 3, & 4, E SW	197.87
30: Lot 3	39.48
T. 13 S., R. 45 E.	
Sec. 30: Lot 3	40.06
T. 8 S., R. 46 E.	
Sec. 1: Lot 2	40.00
T. 7 S., R. 47 E.	
Sec. 31: NE NE , S SW NE	60.00

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BUREAU OF LAND MANAGEMENT
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Ironside Rangeland Program Summary Update

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BUREAU OF LAND MANAGEMENT

VALE DISTRICT OFFICE
P.O. Box 700 (100 Oregon Street)
Vale, Oregon 97918

March 21, 1986

Dear Concerned Citizen:

The Ironside Rangeland Program Summary/Record of Decision (RPS) was published in 1981. The RPS, in conjunction with individual decisions issued to permittees, established the grazing management program for 379,357 acres in the Baker Resource Area that are administered for livestock grazing under Section 3 of the Taylor Grazing Act.

This document is the second periodic update to the Ironside RPS, and describes the status of implementing the Ironside grazing management program in the Baker Resource Area.

The tables that follow (Tables 1 and 2) display the same type of information that is displayed in the Ironside RPS. Comparing these tables with those in the original RPS will provide more detailed information regarding the changes that have occurred. The original Ironside RPS is available for reference in the Baker Resource Area and Vale District offices.

The original RPS categorized allotments into one of four categories: I = intensive management, N = non-intensive management, E = eliminate and S = stewardship program. A new categorization has since been developed and implemented: M = maintain, I = improve and C = custodial. The "M" allotments are those where present management is satisfactory and objectives are being achieved. "I" allotments are those where greater effort is needed to attain goals and where most efforts are directed. "C" allotments are those where such small percentage of the allotment is public land that BLM management is generally custodial. Allotment 2015 is shown in the "M" category, but is still being managed under the stewardship program.

A review of Table 2 will show that many of the management actions specified in the Ironside RPS have been accomplished. Grazing systems have been implemented on all Improve (I) and Maintain (M) category allotments involving approximately 304,000 acres. In some instances they are interim systems that need further fencing to allow the proposed grazing system to be fully implemented.

Thirty two Allotment Management Plans (AMPs) have been developed for the more significant problem areas, and encompass 147,000 acres. The resource area is continuing to develop AMPs on the "I" category allotments. A Resource Area Monitoring Plan has been developed and is being implemented. Baseline studies have been established in all major allotments. These studies indicate a favorable trend toward objectives in most cases. Based on these studies, the resource area has made some major use changes in allotments where the trend was not favorable.

Thirty-one wildlife exclosures have been established involving 2,040 acres, most of which are riparian related. Of the 190 miles of perennial riparian zones to be improved or maintained, 95 miles have been evaluated:

22 miles are improving
60 miles are being maintained, consistent with objectives
13 miles are continuing to deteriorate
95 miles remain to be evaluated

Streams are continuing to be inventoried and will be prioritized for rehabilitation. A watershed plan is being written for the Morgan Creek drainage. This plan will include proposals to improve all perennial streams within the drainage with primary emphasis on Morgan Creek.

The Ironside RPS indicated that 100 spring overflow areas would be protected by fencing. To date, 25 have been protected. Most of the area covered by the Ironside RPS is now under grazing systems, which will allow greater attention to be given to protecting spring overflow areas, providing funding is available.

Since the completion of the original RPS, 3,535 acres of public land have been transferred to the Forest Service to be included in the Hells Canyon National Recreation Area and 1,240 acres of public land have been sold or exchanged for private lands. These land tenure adjustments have resulted in the elimination of three allotments and boundary adjustments to others. These changes account for allotment number differences between the original RPS and this supplement.

Allotment agreements have been entered into on a few allotments scheduled for use reductions. Most of these agreements are working very well, and the allotments are showing improvement. However, further adjustments will be made on those allotments that are not showing sufficient improvement. The adjustments made to date involved major changes in season of use and/or class of livestock and have not reduced total AUMs licensed.

In the Snake River-Sisley Creek allotment (#1001), a proposed decision has been made to significantly reduce AUMs to facilitate management and riparian recovery.

Sincerely yours,

William C. Calkins

William C. Calkins, District Manager

Jack D. Albright

Jack D. Albright, Area Manager

Table 1 Forage Allocation, Management Objectives and Grazing Systems

Allotment Number and Name	BLM Acs.	FS Acs.	Other Acs.	Mgmt. Cat.	Wldlf. AUMS	Grazing Prefer.	Mgmt.* Obj.	Grazing Systems	System Imp.	AMP Imp.	Use Dates
1001 Snake R. Sisley Cr.	23,027	0	2790	I	296	4,693	1,2,3,4	Def-Rot	Yes	Yes	4/27-11/30
1002 Iron Mountain	4,809	0	157	I	12	867	3,4	Def-Rot	Yes	Yes	4/16-10/31
1003 Cave Creek	4,873	0	1,258	I	79	795	1,3,4	Def-Rot	Yes	Yes	4/20-11/30
1004 Durkee	9,154	0	1,392	I	75	1,027	3,4	Def-Rot	Yes	Yes	4/16-10/31
1005 Woods Gulch	268	0	325	C	0	28	None	Spr-Fall	Yes	No	4/16-11/30
1006 Huntington	9,790	0	2,837	I	170	1,980	3,4	Def-Rot	Yes	Yes	4/1-10/31
1007 School Section	606	0	0	M	0	63	None	Spring	No	No	4/16-5/31
1008 Lime Plant	364	0	1,470	C	0	48	None	Seasonal	No	No	6/1-9/30
1009 Slaughterhouse Mtn.	797	0	190	I	11	110	3,4	Spring	Yes	No	4/19-6/15
1010 West Highway	253	0	1,580	C	0	30	None	Seasonal	No	No	4/1-4/30
1011 South Durbin Cr.	775	0	40	I	0	168	None	Spr-Fall	Yes	No	6/16-12/1
1012 Cavanaugh Creek	118	0	4,235	C	0	16	None	Seasonal	No	No	6/1-9/30
1013 Benson Creek	3,359	0	186	I	0	858	1,3,4	Def-Rot	Yes	No	5/5-11/15
1014 Freeway	533	0	302	M	0	122	4	Spr-Fall	Yes	No	4/1-11/30
1015 East Table Mtn.	1,240	0	661	I	8	259	3,4	Def-Rot	Yes	Yes	4/16-11/15
1016 Table Mtn.	7,678	0	1,255	I	0	2,212	1,3,4	Rest-Rot	Yes	Yes	4/16-11/15
1017 Burned	1,254	0	53	M	0	343	1,3,4	Def-Rot	Yes	No	4/16-10/31
1018 Upper Durbin Cr.	1,004	0	346	M	0	197	3,4	Def-Rot	Yes	No	4/16-10/31
1019 Marshall Creek	194	0	1,563	C	0	23	None	Seasonal	No	No	7/16-9/15
1020 Dixie Creek	2,933	0	1,243	I	40	404	1,3,4	Def-Rot	Yes	No	5/1-10/12
1021 Pedro Mtn.	2,700	0	8,789	I	55	552	1,3,4	Def-Rot	Yes	No	6/1-11/30
1022 Bowman Flat	245	0	122	M	0	65	None	Spring	Yes	No	4/1-5/31
1023 Rattlesnake Gulch	402	0	309	I	25	92	1,4	Def-Rot	Yes	No	5/1-10/12
1024 Upper Shirttail Cr.	501	0	243	M	8	111	None	Def-Rot	Yes	No	5/1-10/12
1025 Baldy Mtn.	80	0	472	C	0	10	None	Seasonal	No	No	5/1-10/31
1026 North Dixie Cr.	980	0	2,150	I	10	195	1,4	Def-Rot	Yes	No	6/1-11/30
1027 Lost Basin	1,337	0	6,763	C	0	282	None	Seasonal	No	No	4/16-10/31
1028 Upper Cave Cr.	105	0	720	C	0	27	None	Seasonal	No	No	4/10-10/31
1029 True Blue Gulch	62	0	2,211	C	0	14	None	Seasonal	No	No	4/1-10/31
1030 Hollowfield Canyon	301	0	385	M	0	42	None	Summer	Yes	No	6/22-8/21
1031 Shirttail Creek	806	0	901	I	0	152	3,4	Spr-Fall	Yes	No	4/15-11/14
1032 French Creek	954	0	1,135	C	0	143	None	Seasonal	No	No	4/1-11/30
1033 Fur Mtn.	399	0	1,661	C	0	48	None	Seasonal	No	No	4/10-10/31
1034 Clough Gulch	18	0	259	C	0	2	None	Seasonal	No	No	5/1-11/30
1035 Upper Clough Gulch	95	0	535	C	0	35	None	Seasonal	No	No	5/1-11/30
1036 Weatherby Mtn.	210	0	1799	C	0	28	None	Seasonal	No	No	5/1-10/30
1037 Rye Valley	2,740	0	120	I	0	668	3,4	Def-Rot	Yes	Yes	4/16-11/30
1038 Beaver Creek	341	0	694	C	0	47	None	Spring	No	No	4/16-5/15
1039 Turner Gulch	3,746	0	444	M	19	484	1,3,4	Def-Rot	Yes	No	4/1-12/15
1040 Little Valley	3,199	0	1,627	M	0	695	1,3,4	Def-Rot	Yes	No	4/16-11/30
1041 Cinder Butte	1,540	0	1,617	M	0	243	3,4	Def-Rot	Yes	No	4/16-11/30
1043 Whiskey Gulch	80	0	479	C	0	27	None	Seasonal	No	No	5/16-6/15
1044 Juniper Mtn.	2,072	0	260	M	8	318	1,3,4	Def-Rot	Yes	No	4/1-12/15
1045 Jordon Creek	607	0	1,170	C	0	91	None	Seasonal	No	No	4/1-12/15
1046 Durkee Timber	859	0	1,513	M	0	122	None	Seasonal	Yes	No	6/16-9/15
1048 Nodine Creek	3,054	0	8,035	I	10	684	1,3,4	Def-Rot	Yes	No	6/1-11/30
1049 Lower Manning Cr.	479	0	3219	C	0	40	None	Seasonal	No	No	4/1-11/30
1050 North Swayze Cr.	320	0	40	M	0	24	None	Spring	No	No	4/1-5/20
1051 Alder Creek	141	0	371	C	0	13	None	Seasonal	No	No	4/16-10/31
1052 Trail Creek	885	0	3,373	C	0	107	None	Seasonal	No	No	4/16-10/31
1053 Spring Gulch	38	0	145	I	0	7	None	Def-Rot	Yes	No	5/1-10/12
1054 Pipeline	110	0	153	C	0	12	None	Seasonal	No	No	4/1-7/31
1055 North Manning Cr.	509	0	505	M	0	50	None	Spring	No	No	4/16-5/15
1056 Horseshoe	204	0	81	M	0	7	None	Seasonal	No	No	5/16-8/30
1057 Hibbard Creek	160	0	240	C	0	24	None	Seasonal	No	No	9/15-11/30
1058 Plano School	40	0	250	C	0	6	None	Seasonal	No	No	4/1-4/30
1062 Powell Creek	630	0	3,240	C	0	39	None	Seasonal	No	No	4/1-11/30
1063 Bayhorse	242	0	1,330	C	0	36	None	Seasonal	No	No	4/1-11/30
1064 Gold Creek	370	0	4,051	C	0	41	None	Seasonal	No	No	6/1-10/15
1065 Pearce Gulch	63	0	568	C	0	6	None	Seasonal	No	No	4/16-12/15
1066 Farewell Bend	738	0	300	M	0	162	None	Seasonal	No	No	4/1-7/15
1067 Tunnel	21	0	145	C	0	4	None	Seasonal	No	No	9/22-11/30
1301 South Bridgeport	17,192	0	1,513	I	226	3,240	1,3,4	Def-Rot	Yes	No	5/1-9/30
1302 North Bridgeport	11,402	4,390	753	I	0	827	1,3,4	Def-Rot	Yes	No	5/16-10/15
1318 Mormon Basin	9,734	0	2,825	I	0	1,295	1,3,4	Def-Rot	Yes	Yes	5/1-9/15
1320 Mill Gulch	1,243	0	536	M	0	98	4	Seasonal	No	No	5/1-6/1
1326 Brinker Creek	20	0	507	C	0	2	None	Seasonal	No	No	7/1-7/31
1327 Meyer Gulch	167	0	2,351	C	0	15	None	Seasonal	No	No	5/1-9/30
1329 Pine Creek	520	0	1,600	C	0	60	None	Seasonal	No	No	5/1-9/30
1330 Juniper Hill	217	0	2,024	C	0	17	None	Seasonal	No	No	5/1-5/30
1333 Marble Creek	84	0	1,118	C	0	14	None	Seasonal	No	No	4/1-4/30
2002 Sunnyslope	492	0	2,024	C	0	51	None	Seasonal	No	No	4/1-12/15
2003 Powder River	210	0	0	C	0	35	None	Seasonal	No	No	4/16-5/15
2004 Five Mile	1,373	0	49	M	5	150	1,3,4	Rest-Rot	Yes	No	4/10-6/9
2005 Second Creek	3,131	0	46	M	0	450	1,4	Rest-Rot	Yes	No	4/16-6/15
2006 Crystal Palace	105	0	567	C	0	6	None	Seasonal	No	No	4/16-11/30
2007 Sardine Creek	585	0	2,325	C	0	104	None	Seasonal	No	No	4/16-10/30
2008 River Individual	339	0	1,990	C	10	66	None	Seasonal	No	No	4/10-10/30
2010 Bone Gulch	201	0	914	C	0	7	None	Seasonal	No	No	5/1-11/30
2011 Beagle Creek	117	0	715	C	0	7	None	Seasonal	No	No	4/1-10/31
2012 Big Creek	3,086	0	15	M	25	282	1,2,3,4	Def-Rot	Yes	No	4/16-1/15
2013 Highway -203	120	0	282	C	0	4	None	Seasonal	No	No	4/1-1/15
2015 Magpie Peak	2,100	0	184	M	0	428	4	Def-Rot	Yes	Yes	4/1-1/30
2017 West Magpie Peak	760	0	1,267	C	0	123	None	Rotation	Yes	No	4/16-6/15
2019 Salt Creek	2,017	0	2,447	M	0	343	4	Def-Rot	Yes	No	4/10-12/31
2020 Crews Creek	2,996	0	962	I	0	420	4	Rotation	Yes	Yes	4/10-7/9
2021 Seeding	400	0	0	M	5	150	4	Spring	Yes	No	4/10-5/9
2022 Ridley Creek	78	0	16	C	0	10	None	Seasonal	No	No	5/1-9/30
2023 Upper Pittsburg	350	0	7	M	13	36	1,4	Def-Rot	Yes	No	6/15-9/30
2024 Table Rock	2,117	0	45	I	73	286	1,3,4	Def-Rot	Yes	Yes	4/16-1/15
2025 Upper Spring Cr.	555	0	0	M	0	80	3,4	Def-Rot	Yes	Yes	4/16-1/15
2026 East Spring Cr.	206	0	345	C	0	25	None	Seasonal	N	No	4/16-12/31
2027 West Balm Creek	175	0	10	C	0	25	None	Spring	No	No	5/1-5/8
2028 Sawmill Creek	180	0	0	C	0	35	None	Def-Rot	Yes	No	5/1-11/30
2030 Lower Powder	556	0	40	M	7	78	4	Def-Rot	Yes	No	4/16-12/31
2031 Bulldozer	3,986	0	358	M	0	1,332	4	Def-Rot	Yes	No	4/16-1/15
2032 Goose Creek	3,886	0	571	M	0	387	3,4	Rest-Rot	Yes	Yes	4/16-12/31
2033 Lower Salt Creek	277	0	486	C	0	26	None	Seasonal	No	No	4/16-11/30
2034 Love Creek	1,794	0	88	M	0	180	1,3,4	Rest-Rot	Yes	No	4/16-1/15
2035 Waterspout	1,885	0	63	M	0	605	1,4	Def-Rot	Yes	Yes	4/16-1/15
2036 Table Mountain	600	0	0	M	0	52	1,3,4	Rest-Rot	Yes	No	5/1-10/31
2037 Balm Creek	3,945	0	40	I	76	262	1,2,3,4	Rest-Rot	Yes	Yes	5/1-7/15
2038 West Goose Cr.	155	0	10	C	0	4	None	Seasonal	No	No	4/16-5/15
2040 Spring Creek	1,432	0	0	M	29	83	1,3,4	Rest-Rot	Yes	Yes	4/16-10/31
2041 Lower Sawmill	280	0	342	M	0	40	1,4	Def-Rot	Yes	Yes	5/15-10/31
2042 Lower Houghton Cr.	319	0	0	M	0	117	None	Rotation	Yes	No	4/10-8/10
2043 Upper Big Creek	118	0	498	C	0	2	None	Seasonal	No	No	5/1-9/30
2044 North Table Mtn.	119	0	0	C	0	2	None	Seasonal	No	No	4/16-5/15
2048 Upper Clover Creek	847	16	373	I	46	110	1,3,4	Def-Rot	Yes	Yes	4/16-1/15
2050 Upper Ritter Creek	2,713	0	3,454	M	0	500	4	Rest-Rot	Yes	No	4/16-12/31
2051 Gale Place	62	0	727	C	0	11	None	Seasonal	No	No	4/16-11/30
2055 Clover Creek	1,061	0	1,671	I	6	105	1,3,4	Rest-Rot	Yes	Yes	4/16-12/15
2060 Farley Hills	460	0	2,921	C	0	42	None	Seasonal	No	No	4/16-7/15
2062 Magpie Creek	84	0	3,216	C	0	9	None	Seasonal	No	No	4/16-7/15
2063 Upper Crews Creek	200	0	2,577	C	0	16	None	Seasonal	No	No	4/16-10/30
2064 North Sparta	24	0	0	C	0	2	None	Seasonal	No	No	6/1-8/31
2065 Town Gulch	24	0	452	C	0	2	None	Seasonal	No	No	6/1-10/31
2066 Baldock	39	0	768	C	0	20	None	Seasonal	No	No	4/1-1/30
2067 Ranch Creek	262	0	820	C	0	36	None	Seasonal	No	No	4/1-10/31
2068 Rosebud Mine	133	0	475	C	0	6	None	Seasonal	No	No	6/1-10/31
2069 Lone Pine Mtn.	296	0	3,027	C	0	30	None	Seasonal	No	No	5/1-7/15
2070 Summit Pasture	1,235	0	417	M	0	110	3,4	Spring	Yes	No	4/16-5/3
2071 McCann Springs	1,785	0	0	M	0	450	4	Def-Rot	Yes	No	4/16-1/15
2073 Oregon Trail	380	0	1,649	C	0	25	None	Seasonal	No	No	4/16-10/31
2074 Pritchard Creek	13,587	0	1,346	M	35	2,198	1,2,4	Rest-Rot	Yes	Yes	4/16-8/31
2075 Unity Creek	582	0	1,411	C	0	87	None	Seasonal	No	No	4/1-12/31
2076 Pritchard Flat	446	0	6,445	C	0	47	None	Seasonal	No	No	4/16-11/15
2077 Ritter Creek	770	0	369	M	0	154	4	Spring	Yes	No	5/1-5/31
2078 North Flagstaff	1,802	0	62	M	0	232	4	Def-Rot	Yes	No	4/16-12/15
2079 South Flagstaff	172	0	650	C	0	8	None	Seasonal	No	No	4/16-5/31
2081 Upper Houghton Cr.	340	0	42	M	0	87	4	Rotation	Yes	No	4/10-8/10
2083 Big Rattlesnake	178	0	1,318	C	1	16	None	Seasonal	No	No	5/1-10/31
2084 Powder River Canyon	1,207	0	178	I	0	100	1,3,4	Def-Rot	Yes	Yes	4/16-11/30
2085 West Clover Creek	545	0	140	M	0	95	4	Def-Rot	Yes	Yes	4/16-1/15
2086 White Swan Mine	475	0	180	C	0	65	None	Spring	No	No	4/16-5/15
2087 First Creek	578	0	3,964	C	0	66	None	Seasonal	No	No	4/16-9/30
2092 Canyon Creek	200	0	1,457	C	0	8	None	Seasonal	No	No	5/1-9/30
2094 North Bacher	135	0	0	C	0	33	None	Spr-Fall	No	No	4/16-10/31
2095 Homesite	80	0	309	C	0	11	None	Seasonal	No	No	4/16-12/31
2096 Virtue Flat	298	0	2,931	C	0	40	None	Seasonal	No	No	4/16-6/15
2097 Dry Gulch	40	0	850	C	0	6	None	Seasonal	No	No	4/1-9/30
2099 Virtue Hills	4,093	0	3,818	I	0	450	3,4	Def-Rot	Yes	Yes	6/15-9/15
2100 Encina	40	0	550	C	0	2	None	Seasonal	No	No	4/16-9/30
2101 Quartz Creek	40	0	1,058	C	0	4	None	Seasonal	No	No	4/16-10/31
2102 North Sardine Creek	185	0	316	C	0	19	None	Seasonal	No	No	4/16-5/15
2103 Lawrence Creek	50	0	796	C	0	9	None	Seasonal	No	No	6/1-9/30
2104 Interchange	250	0	691	C	0	16	None	Seasonal	No	No	4/16-10/31
2105 Love Pasture	1,260	0	1	M	0	317	1,4	Def-Rot	Yes	No	4/16-1/15
2106 Christy Springs	200	0	525	C	0	31	None	Seasonal	No	No	4/16-12/31
2108 Keating Highway	4,386	0	11	M	0	500	4	Def-Rot	Yes	No	4/16-12/15
2109 Ruckles Creek	5,923	0	266	I	0	900	3,4	Rotation	Yes	Yes	4/16-1/15
2111 Bacher Creek	831	0	1,189	M	0	116	1,3,4	Def-Rot	Yes	No	4/16-1/15
2112 Maiden Gulch	1,055	0	2,308	C	21	99	None	Seasonal	No	No	4/16-11/15
2114 Little Lookout	890	0	11,081	C	0	77	None	Seasonal	No	No	4/16-11/15
2115 Tucker Creek	1,475	0	753	I	0	260	3,4	Rotation	Yes	Yes	4/16-7/1
2116 East Balm Creek	1,103	0	6	M	0	192	1,4	Def-Rot	Yes	No	4/1-1/15
2118 Fruit Springs	456	268	2,770	C	0	30	None	Seasonal	No	No	4/16-9/30
2120 Pleasant Valley	193	0	1,430	C	0	28	None	Seasonal	No	No	4/16-9/30
2121 East Pleasant Valley	375	0	106	M	0	88	4	Rotation	Yes	No	4/16-7/31
2127 Kelley Creek	1,716	0	10	M	0	220	1,4	Def-Rot	Yes	No	4/16-1/15
2128 Risley Butte	2,501	0	561	M	0	380	1,4	Rotation	Yes	No	4/16-6/15
2129 Chalk Bluff	645	0	22	M	0	90	1,4	Rotation	Yes	No	4/6-6/15
2130 Lyle Creek	409	0	6,835	C	0	29	None	Seasonal	No	No	4/16-10/31
2132 Kuykendahl Creek	40	0	330	C	0	4	None	Seasonal	No	No	6/1-10/31
2139 West Crews	80	0	594	C	0	13	None	Seasonal	No	No	4/16-11/30
2142 North Ridley Creek	40	0	470	C	0	4	None	Seasonal	No	No	4/16-12/31
3015 Daly Creek	1,610	0	1,871	C	22	184	3,4	Def-Rot	Yes	Yes	5/1-9/20
3024 Horseshoe	118	0	252	C	0	10	None	Seasonal	No	No	4/1-4/30
3025 Maiden Gulch	328	0	996	C	0	22	None	Seasonal	No	No	4/1-5/31
3026 Soda Creek	9,289	0	8,737	I	132	1,278	1,3,4	Def-Rot	Yes	No	4/16-12/1
3027 Canyon Creek	40	0	687	C	0	3	None	Seasonal	No	No	4/1-6/30
3028 Keystone Mine	291	0	0	C	0	24	None	Seasonal	No	No	4/16-6/15
3029 Dry Gulch	2,076	0	1,320	I	15	185	3,4	Def-Rot	Yes	No	4/15-9/30
3030 Lower Timber Canyon	270	0	848	C	0	14	None	Seasonal	No	No	4/1-5/31
3031 Upper Dry Gulch	440	0	2,069	C	0	33	None	Seasonal	No	No	4/15-6/5
3037 Daly Creek Indiv.	684	0	6,121	C	0	96	None	Seasonal	No	No	4/1-9/30
3041 West Fork	40	0	50	C	0	5	None	Seasonal	No	No	4/1-8/31
3043 Longbranch	45	0	693	C	0	5	None	Seasonal	No	No	4/1-8/31
3045 McLean Gulch	146	0	1,707	C	0	14	None	Seasonal	No	No	415-5/15
3047 New Bridge	136	0	0	C	0	7	None	Seasonal	No	No	4/16-5/15
3048 Sag Creek	40	0	0	C	0	5	None	Seasonal	No	No	4/16-5/15
3049 Barnard Creek	1,998	0	1,007	I	0	99	1,3,4	Rest-Rot	No	Yes	4/16-5/28
5001 Coyote Point	400	0	2,210	C	0	16	None	Seasonal	No	No	4/1-4/30
5080 Thief Valley	180	0	0	C	0	11	None	Seasonal	No	No	4/16-9/30
5133 Riverdale Hill	125	0	0	C	0	29	None	Seasonal	No	No	4/16-5/15
5137 Reservoir	144	0	1,100	C	0	10	None	Seasonal	No	No	4/16-5/15
5138 Bulger Flat	40	0	0	C	0	5	None	Seasonal	No	No	5/1-9/30
5201 Brannon Gulch	3,247	0	3,443	I	12	170	1,3,4	Rest-Rot	Yes	No	5/1-10/31
5202 Brown Rocks	1,292	0	3,826	C	0	72	None	Seasonal	No	No	5/1-7/9
5203 Big Creek	80	0	388	C	0	10	None	Seasonal	No	No	5/1-9/30
5204 Hawry Flat	1,059	0	1,708	C	2	66	None	Seasonal	No	No	4/15-5/30
5205 North Hereford	350	0	0	C	0	23	None	Seasonal	No	No	4/16-5/15
5206 Whipple Gulch	1,159	0	0	C	0	116	None	Seasonal	No	No	5/1-10/31
5207 Hereford Valley	80	0	810	C	0	3	None	Seasonal	No	No	9/1-11/30
5208 Camp Ditch	75	0	1,422	C	0	5	None	Seasonal	No	No	5/1-5/31
5209 Camp Creek	2,798	0	102	I	0	141	3,4	Rest-Rot	Yes	No	4/20-6/31
5210 Beaverdam Creek	29	0	350	C	0	2	None	Seasonal	No	No	5/1-5/31
5211 King Mountain	650	0	2,360	C	20	28	None	Seasonal	No	No	4/16-6/15
5212 Rock Creek	128	0	0	C	2	10	None	Seasonal	No	No	5/1-5/31
5213 Tiger	70	0	0	C	0	10	None	Seasonal	No	No	4/16-6/15
5215 Denny Flat	6,620	0	1,160	I	0	376	3,4	Rest-Rot	Yes	No	4/21-6/15
5216 West Camp Creek	669	9	502	C	0	45	None	Seasonal	No	No	4/21-6/2
5217 Elms Reservoir	120	0	0	C	0	8	None	Seasonal	No	No	4/1-4/30
5218 Junction	160	0	718	C	0	112	None	Seasonal	No	No	5/1-9/30
5219 Dry Gulch	327	0	1,595	C	0	32	None	Seasonal	No	No	4/20-9/15
5220 Whitted Ditch	76	0	725	C	0	4	None	Seasonal	No	No	4/1-4/30
5221 China Creek	161	0	480	C	0	9	None	Seasonal	No	No	4/1-4/30
5222 Meadow Creek	40	0	0	C	0	4	None	Seasonal	No	No	5/1-5/30
5223 Upper Meadow Cr.	200	0	223	C	0	13	None	Seasonal	No	No	5/1-5/30
5225 Job Creek	65	0	0	C	0	3	None	Seasonal	No	No	10/1-10/31
5226 Cow Creek	118	0	593	C	0	7	None	Seasonal	No	No	6/1-6/30
5227 Copper Creek	235	0	0	C	0	20	None	Seasonal	No	No	5/1-8/31
5228 Sunflower Flat	160	0	0	C	0	20	None	Seasonal	No	No	6/1-10/31
5230 Middle Fork	200	0	0	C	0	19	None	Seasonal	No	No	10/1-10/31
5233 Bullrun	32	0	0	C	0	4	None	Seasonal	No	No	4/1-4/30
5234 Reed Creek	341	0	0	C	0	22	None	Seasonal	No	No	5/16-6/15
5235 North Fork	355	0	396	C	0	29	None	Seasonal	No	No	5/15-8/15
5236 Cottonwood Creek	288	0	0	C	0	32	None	Seasonal	No	No	10/1-10/31
5238 Short Creek	37	0	0	C	0	6	None	Seasonal	No	No	10/1-10/31
5303 Lindsay Mountain	936	0	448	I	3	137	1,4	Def-Rot	Yes	Yes	4/20-7/25
5304 Titus	292	0	0	C	0	9	None	Seasonal	No	No	4/16-7/15
5305 Hooker Gulch	70	0	615	C	0	6	None	Seasonal	No	No	8/1-8/31
5306 Dry Gulch	93	0	477	C	0	4	None	Seasonal	No	No	7/1-10/31
5307 Ebell Creek	120	0	1,701	C	0	4	None	Seasonal	No	No	5/1-6/30
5310 South Baker	279	0	629	C	0	25	None	Seasonal	No	No	4/16-5/15
5311 Elk Creek	2,228	0	3,863	M	1	221	3,4	Seasonal	No	No	4/16-6/30
5312 Juniper Gulch	355	0	1,630	C	0

MAP 1

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

BAKER RMP
VALE DISTRICT

MARCH 1986

WASHINGTON

5 0 5 10 15 20 25 MILES

SPOKANE DISTRICT

COLUMBIA

ASOTIN

PRINEVILLE DISTRICT

BOARDMAN BOMBING RANGE

UMATILLA ARMY DEPOT

UMATILLA INDIAN RESERVATION

UMATILLA NATIONAL FOREST

WALLOWA - WHITMAN NATIONAL FOREST

HELLS CANYON NATIONAL RECREATION AREA

EAGLE CAP WILDERNESS

MORROW

GILLIAM

WHEELER

GRANT

BURNS DISTRICT

WALLOWA

UNION

WHITMAN

BAKER

MALHEUR

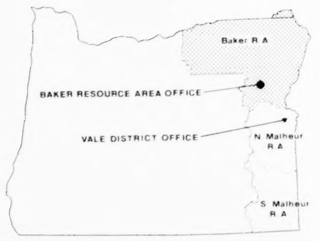
IDAHO

BOISE DISTRICT

NORTHERN MALHEUR RESOURCE AREA

LEGEND

- District Boundary
- County Boundary
- Resource Area Boundary
- BLM Lands
- USFS Lands
- State Lands
- Indian Lands
- Other Federal Lands
- Private Lands
- Wilderness Study Areas
  - OR-6-1 McGraw Creek
  - OR-6-2 Homestead
  - OR-6-3 Sheep Mountain



MAP 2

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

BAKER RMP
VALE DISTRICT

MARCH 1986

WASHINGTON

5 0 5 10 15 20 25 MILES

SPOKANE DISTRICT

COLUMBIA

GARFIELD

ASOTIN

PRINEVILLE DISTRICT

BOARDMAN BOMBING RANGE

Hermiston

Milton-Freewater

Pendleton

UMATILLA INDIAN RESERVATION

UMATILLA NATIONAL FOREST

MORROW

Heppner

GILLIAM

WHEELER

BURNS DISTRICT

GRANT

UNION

La Grande

WALLOWA - WHITMAN NATIONAL FOREST

WALLOWA

WHITMAN

NATIONAL FOREST

BAKER

MALHEUR

NATIONAL FOREST

MONUMENT ROCK WILDERNESS

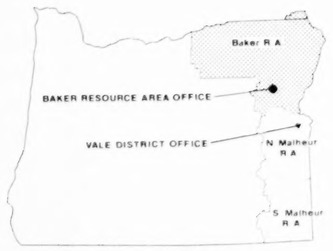
NORTHERN MALHEUR RESOURCE AREA

BOISE DISTRICT

IDAHO

Commercial Forest Lands
and
High to Severe Erosion Potential

- Commercial Forest Lands
- High to Severe Water Erosion Potential
- High to Severe Wind and Water Erosion Potential



Ironside Rangeland Program Summary Update

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management

VALE DISTRICT
Baker Resource Area

Allotment Number and Name

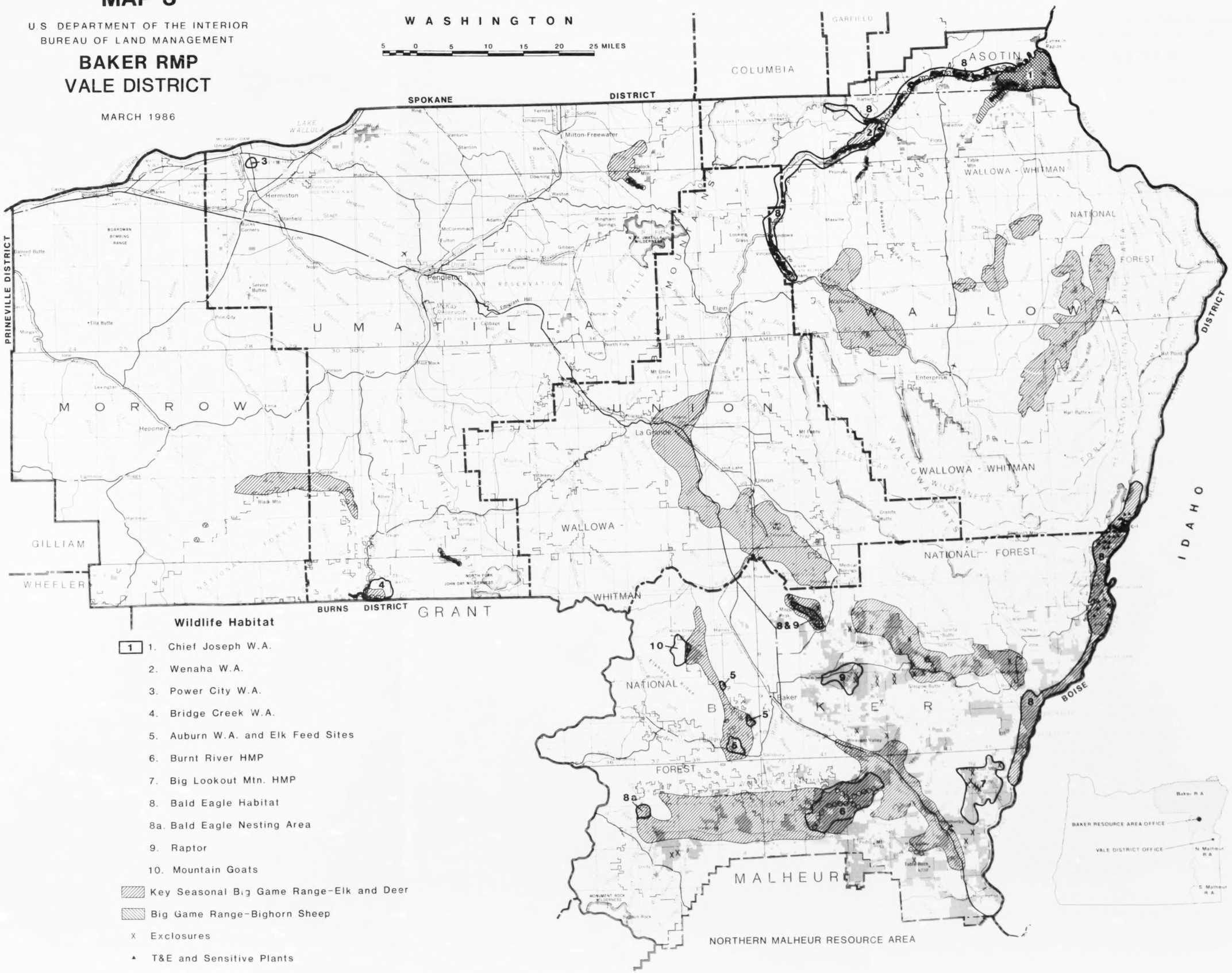
1001 Snake R. Sisley Cr.
1002 Iron Mountain
1003 Cave Creek
1004 Durkee
1005 Woods Gulch
1006 Huntington
1007 School Section
1008 Lime Plant
1009 Slaughterhouse Mtn.
1010 West Highway
1011 South Durbin Cr.
1012 Cavanaugh Creek
1013 Benson Creek
1014 Freeway
1015 East Table Mtn.
1016 Table Mtn.
1017 Burned
1018 Upper Durbin Cr.
1019 Marshall Creek
1020 Dixie Creek
1021 Pedro Mtn.
1022 Bowman Flat
1023 Rattlesnake Gulch
1024 Upper Shirttail Cr.
1025 Baldy Mtn.
1026 North Dixie Cr.
1027 Lost Basin
1028 Upper Cave Cr.
1029 True Blue Gulch
1030 Hollowfield Canyon
1031 Shirttail Creek
1032 French Creek
1033 Fur Mtn.
1034 Clough Gulch
1035 Upper Clough Gulch
1036 Weatherby Mtn.
1037 Rye Valley
1038 Beaver Creek
1039 Turner Gulch
1040 Little Valley
1041 Cinder Butte
1043 Whiskey Gulch
1044 Juniper Mtn.
1045 Jordon Creek
1046 Durkee Timber
1048 Nodine Creek
1049 Lower Manning Cr.
1050 North Swayze Cr.
1051 Alder Creek
1052 Trail Creek
1053 Spring Gulch
1054 Pipeline
1055 North Manning Cr.
1056 Horseshoe
1057 Hibbard Creek
1058 Plano School
1062 Powell Creek
1063 Bayhorse
1064 Gold Creek
1065 Pearce Gulch
1066 Farewell Bend
1067 Tunnel
1301 South Bridgeport
1302 North Bridgeport
1318 Mormon Basin
1320 Mill Gulch
1326 Brinker Creek
1327 Meyer Gulch
1329 Pine Creek
1330 Juniper Hill
1333 Marble Creek
2002 Sunnyslope
2003 Powder River
2004 Five Mile
2005 Second Creek
2006 Crystal Palace
2007 Sardine Creek
2008 River Individual
2010 Bone Gulch
2011 Beagle Creek
2012 Big Creek
2013 Highway #203
2015 Magpie Peak
2017 West Magpie Peak
2019 Salt Creek
2020 Crews Creek
2021 Seeding
2022 Ridley Creek
2023 Upper Pittsburg
2024 Table Rock
2025 Upper Spring Cr.
2026 East Spring Cr.
2027 West Balm Creek
2028 Sawmill Creek
2030 Lower Powder
2031 Bulldozer
2032 Goose Creek
2033 Lower Salt Creek
2034 Love Creek
2035 Waterspout
2036 Table Mountain
2037 Balm Creek
2038 West Goose Cr.
2040 Spring Creek
2041 Lower Sawmill
2042 Lower Houghton Cr.
2043 Upper Big Creek
2044 North Table Mtn.
2048 Upper Clover Creek
2050 Upper Ritter Creek
2051 Gale Place
2055 Clover Creek
2060 Farley Hills
2062 Magpie Creek
2063 Upper Crews Creek
2064 North Sparta
2065 Town Gulch
2066 Baldock
2067 Ranch Creek
2068 Rosebud Mine
2069 Lone Pine Mtn.
2070 Summit Pasture
2071 McCann Springs
2073 Oregon Trail
2074 Pritchard Creek
2075 Unity Creek
2076 Pritchard Flat
2077 Ritter Creek
2078 North Flagstaff
2079 South Flagstaff
2081 Upper Houghton Cr.
2083 Big Rattlesnake
2084 Powder River Canyon
2085 West Clover Creek
2086 White Swan Mine
2087 First Creek
2092 Canyon Creek
2094 North Bacher
2095 Homesite
2096 Virtue Flat
2097 Dry Gulch
2099 Virtue Hills
2100 Encina
2101 Quartz Creek
2102 North Sardine Creek
2103 Lawrence Creek
2104 Interchange
2105 Love Pasture
2106 Christy Springs
2108 Keating Highway
2109 Ruckles Creek
2111 Bacher Creek
2112 Maiden Gulch
2114 Little Lookout
2115 Tucker Creek
2116 East Balm Creek
2118 Fruit Springs
2120 Pleasant Valley
2121 East Pleasant Valley
2127 Kelley Creek
2128 Risley Butte
2129 Chalk Bluff
2130 Lyle Creek
2132 Kuykendahl Creek
2139 West Crews
2142 North Ridley Creek
3015 Daly Creek
3024 Horseshoe
3025 Maiden Gulch
3026 Soda Creek
3027 Canyon Creek
3028 Keystone Mine
3029 Dry Gulch
3030 Lower Timber Canyon
3031 Upper Dry Gulch
3037 Daly Creek Indiv.
3041 West Fork
3043 Longbranch
3045 McLean Gulch
3047 New Bridge
3048 Sag Creek
3049 Barnard Creek
5001 Coyote Point
5080 Thief Valley
5133 Riverdale Hill
5137 Reservoir
5138 Bulger Flat
5201 Brannon Gulch
5202 Brown Rocks
5203 Big Creek
5204 Haxry Flat
5205 North Hereford
5206 Whipple Gulch
5207 Hereford Valley
5208 Camp Ditch
5209 Camp Creek
5210 Beaverdam Creek
5211 King Mountain
5212 Rock Creek
5213 Tiger
5215 Denny Flat
5216 West Camp Creek
5217 Elms Reservoir
5218 Junction
5219 Dry Gulch
5220 Whitted Ditch
5221 China Creek
5222 Meadow Creek
5223 Upper Meadow Cr.
5225 Job Creek
5226 Coe Creek
5227 Copper Creek
5228 Sunflower Flat
5230 Middle Fork
5233 Bullrun
5234 Reed Creek
5235 North Fork
5236 Cottonwood Creek
5238 Short Creek
5303 Lindsay Mountain
5304 Titus
5305 Hooker Gulch
5306 Dry Gulch
5307 Ebell Creek
5310 South Baker
5311 Elk Creek
5312 Juniper Gulch
5313 Poker Gulch
5316 Salisbury
5319 Trail Creek
5321 Auburn
5322 Stack Creek
5323 Wendt Butte
5325 Towne Gulch
5332 Hill Creek
5334 Old Auburn
5335 Blue Canyon
5336 Upper Hill Creek
5337 Koontz Creek
5339 Sutton Creek
5340 Littlefield
5342 Log Creek

MAP 3

U.S DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

BAKER RMP
VALE DISTRICT

MARCH 1986



Wildlife Habitat

1. Chief Joseph W.A.
2. Wenaha W.A.
3. Power City W.A.
4. Bridge Creek W.A.
5. Auburn W.A. and Elk Feed Sites
6. Burnt River HMP
7. Big Lookout Mtn. HMP
8. Bald Eagle Habitat
8a. Bald Eagle Nesting Area
9. Raptor
10. Mountain Goats

Key Seasonal Big Game Range–Elk and Deer

Big Game Range–Bighorn Sheep

X Exclosures

▲ T&E and Sensitive Plants

○○○ Fisheries

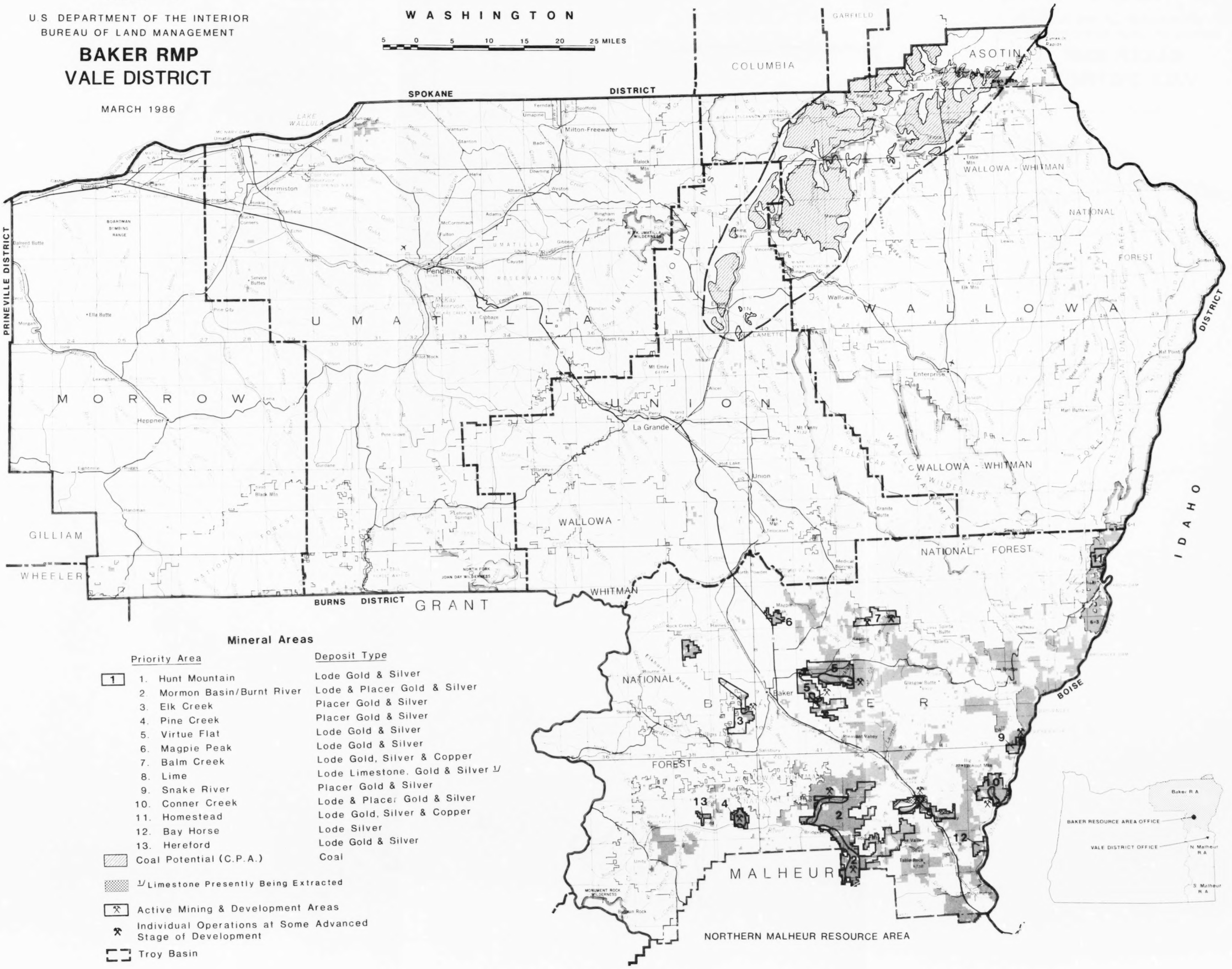
Major Riparian Areas

MAP 4

U.S DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

BAKER RMP
VALE DISTRICT

MARCH 1986



Mineral Areas

Priority Area		Deposit Type
1	1. Hunt Mountain	Lode Gold & Silver
	2. Mormon Basin/Burnt River	Lode & Placer Gold & Silver
	3. Elk Creek	Placer Gold & Silver
	4. Pine Creek	Placer Gold & Silver
	5. Virtue Flat	Lode Gold & Silver
	6. Magpie Peak	Lode Gold & Silver
	7. Balm Creek	Lode Gold, Silver & Copper
	8. Lime	Lode Limestone, Gold & Silver 1/
	9. Snake River	Placer Gold & Silver
	10. Conner Creek	Lode & Placer Gold & Silver
	11. Homestead	Lode Gold, Silver & Copper
	12. Bay Horse	Lode Silver
	13. Hereford	Lode Gold & Silver
Coal Potential (C.P.A.)		Coal

1/ Limestone Presently Being Extracted

Active Mining & Development Areas

Individual Operations at Some Advanced Stage of Development

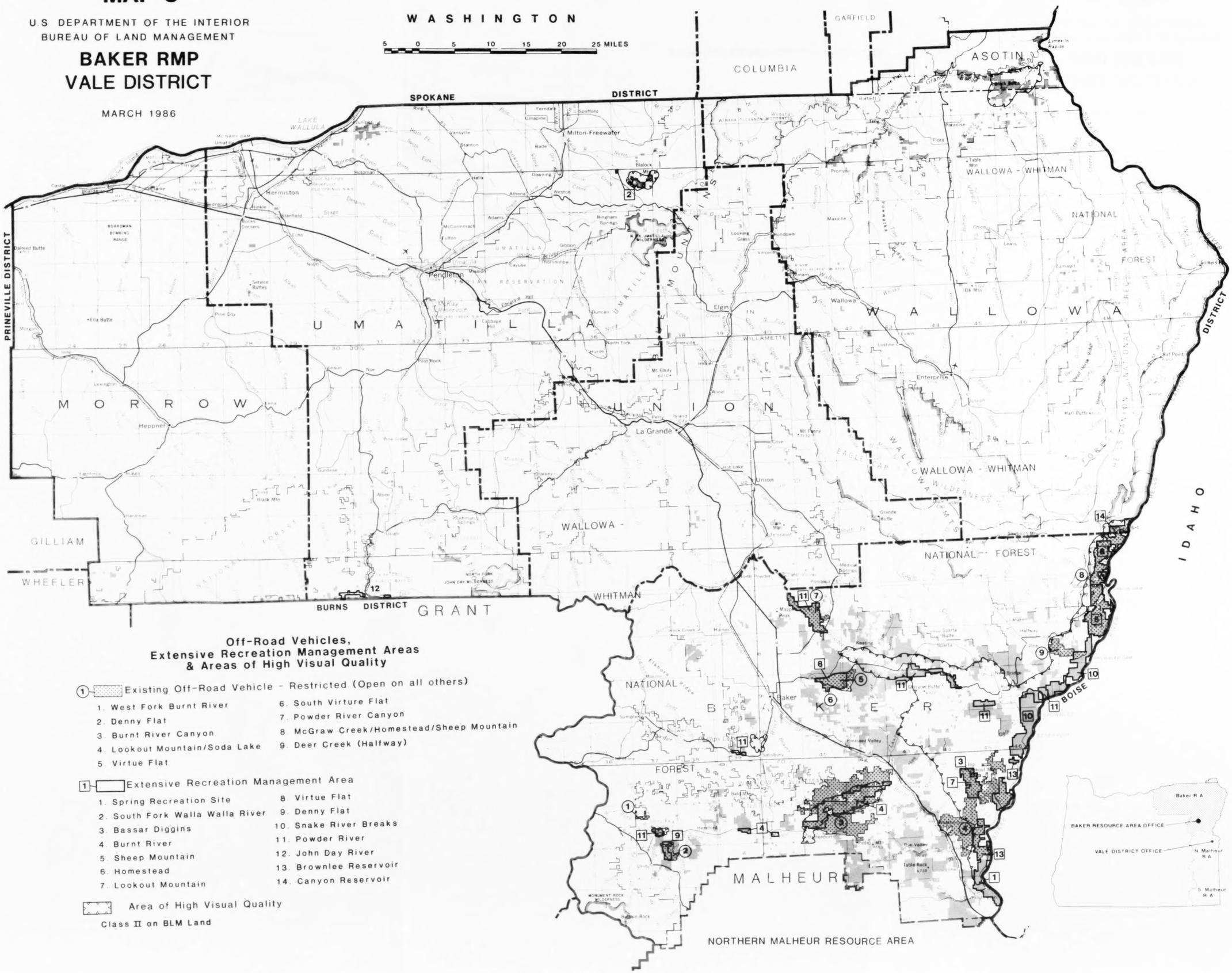
Troy Basin

MAP 5

U.S DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

BAKER RMP
VALE DISTRICT

MARCH 1986

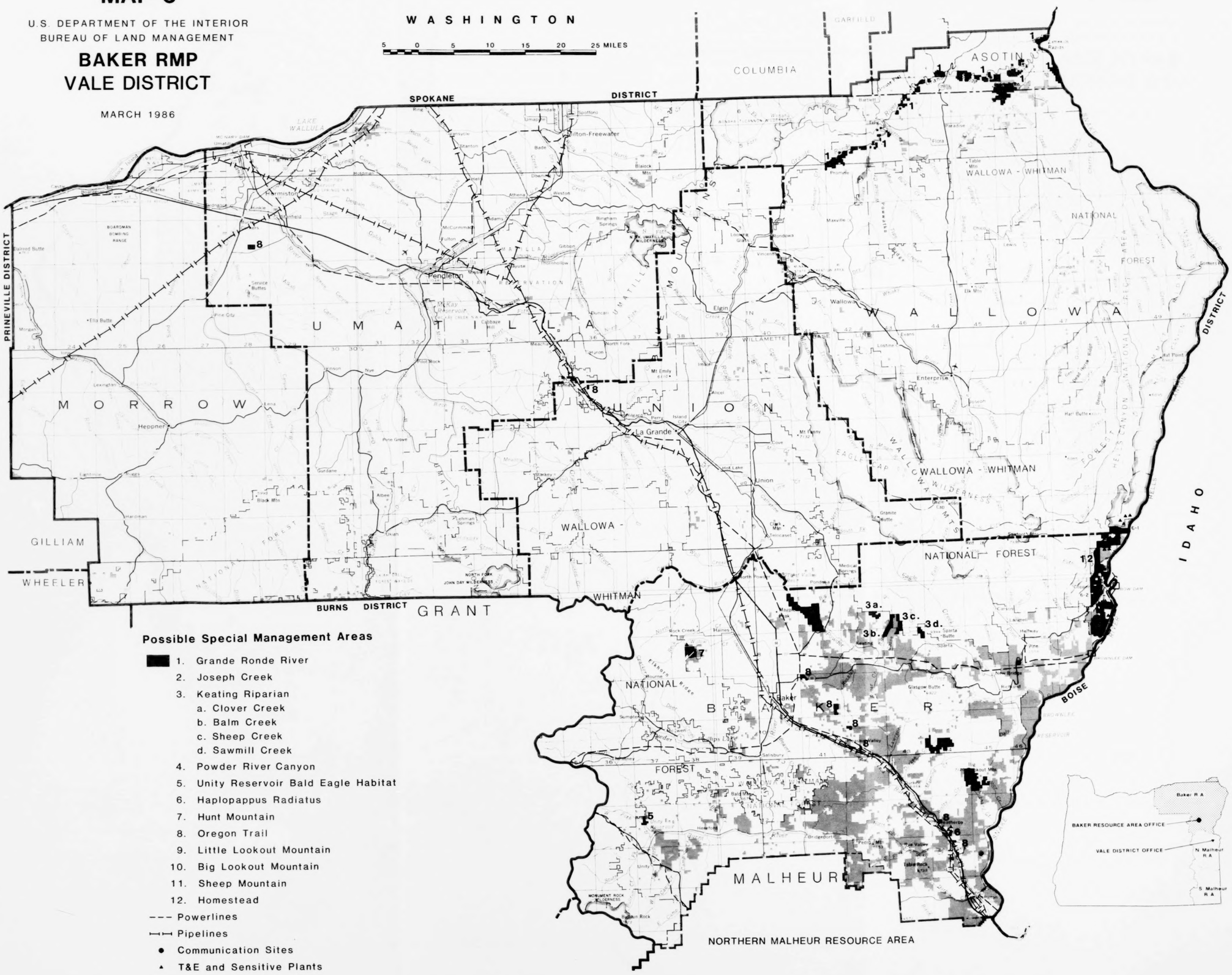

WASHINGTON
5 0 5 10 15 20 25 MILES
SPOKANE DISTRICT
COLUMBIA
GARFIELD
ASOTIN
PRINEVILLE DISTRICT
DISTRICT
IDAHO
BURNS DISTRICT
BOISE
Milton-Freewater
Hermiston
Pendleton
Elgin
Wallowa
Enterprise
La Grande
Union
Baker
Heppner
Ione
Condon
Fossil
Spray
Mitchell
Prineville
Madras
Redmond
Bend
Sisters
Sweet Home
Albany
Salem
Dallas
Monmouth
Independence
Corvallis
Lebanon
Newport
Toledo
Waldport
Yachats
Florence
Reedsport
Coos Bay
Bandon
Port Orford
Gold Beach
Brookings
Grants Pass
Medford
Ashland
Klamath Falls
Lakeview
Alturas
Susanville
Reno
Winnemucca
Lovelock
Fallon
Carson City
Tonopah
Las Vegas
Ely
Elko
Wells
Jackpot
Twin Falls
Burley
Rupert
Pocatello
Blackfoot
Idaho Falls
Rexburg
Driggs
Jackson
Afton
Kemmerer
Evanston
Rock Springs
Green River
Vernal
Rock Springs
Rawlins
Baggs
Saratoga
Encampment
Riverside
Walcott
Casper
Douglas
Glenrock
Lusk
Torrington
Wheatland
Guernsey
Cheyenne
Scottsbluff
Gering
Alliance
Chadron
Crawford
Harrison
Hot Springs
Rapid City
Custer
Deadwood
Lead
Spearfish
Sturgis
Belle Fourche
Newcastle
Gillette
Sheridan
Buffalo
Kaycee
Lander
Riverton
Shoshoni
Thermopolis
Worland
Basin
Cody
Powell
Meeteetse
Greybull
Lovell
Cowley
Frannie
Deaver
Shell
Ten Sleep
Hyattville
Manderson
Kirby
Hanover
Basin

MAP 6

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

BAKER RMP
VALE DISTRICT

MARCH 1986



Possible Special Management Areas

1. Grande Ronde River
2. Joseph Creek
3. Keating Riparian
   a. Clover Creek
   b. Balm Creek
   c. Sheep Creek
   d. Sawmill Creek
4. Powder River Canyon
5. Unity Reservoir Bald Eagle Habitat
6. Haplopappus Radiatus
7. Hunt Mountain
8. Oregon Trail
9. Little Lookout Mountain
10. Big Lookout Mountain
11. Sheep Mountain
12. Homestead

--- Powerlines

⊢⊣ Pipelines

● Communication Sites

▲ T&E and Sensitive Plants

MAP 7

U S DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

BAKER RMP
VALE DISTRICT

MARCH 1986

WASHINGTON

5 0 5 10 15 20 25 MILES

COLUMBIA

GARFIELD

ASOTIN

SPOKANE DISTRICT

PRINEVILLE DISTRICT

WALLOWA - WHITMAN NATIONAL FOREST

UMATILLA INDIAN RESERVATION

BOARDMAN BOMBING RANGE

UMATILLA NATIONAL FOREST

Hermiston

Pendleton

Milton-Freewater

Elgin

Wallowa

Enterprise

MORROW

UMATILLA

UNION

WALLOWA

GILLIAM

WHEELER

GRANT

WHITMAN

BURNS DISTRICT

NATIONAL FOREST

BAKER

MALHEUR

IDAHO

BOISE DISTRICT

MONUMENT ROCK WILDERNESS

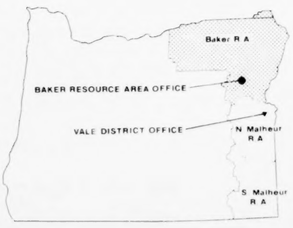
NORTH FORK JOHN DAY WILDERNESS

Land Tenure Proposal for
Baker Planning Area

Z-1 Zone 1 - Retention/Acquisition

Z-2 Zone 2 - Unclassified

Z-3 Zone 3 - Disposal



NORTHERN MALHEUR RESOURCE AREA

MAP 8

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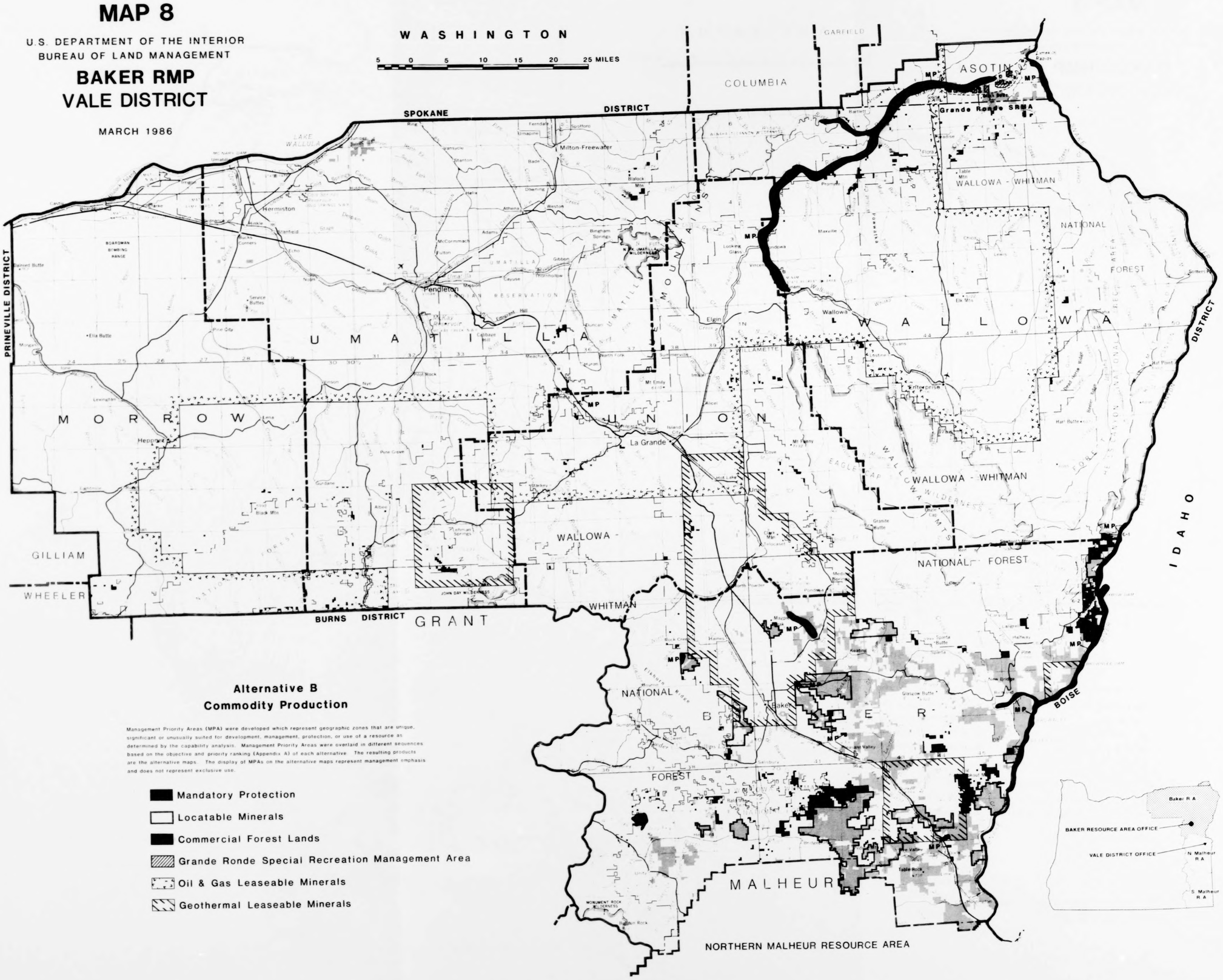
BUREAU OF LAND MANAGEMENT

BAKER RMP
VALE DISTRICT

MARCH 1986



Alternative B
Commodity Production

Management Priority Areas (MPA) were developed which represent geographic zones that are unique, significant or unusually suited for development, management, protection, or use of a resource as determined by the capability analysis. Management Priority Areas were overlaid in different sequences based on the objective and priority ranking (Appendix A) of each alternative. The resulting products are the alternative maps. The display of MPAs on the alternative maps represent management emphasis and does not represent exclusive use.

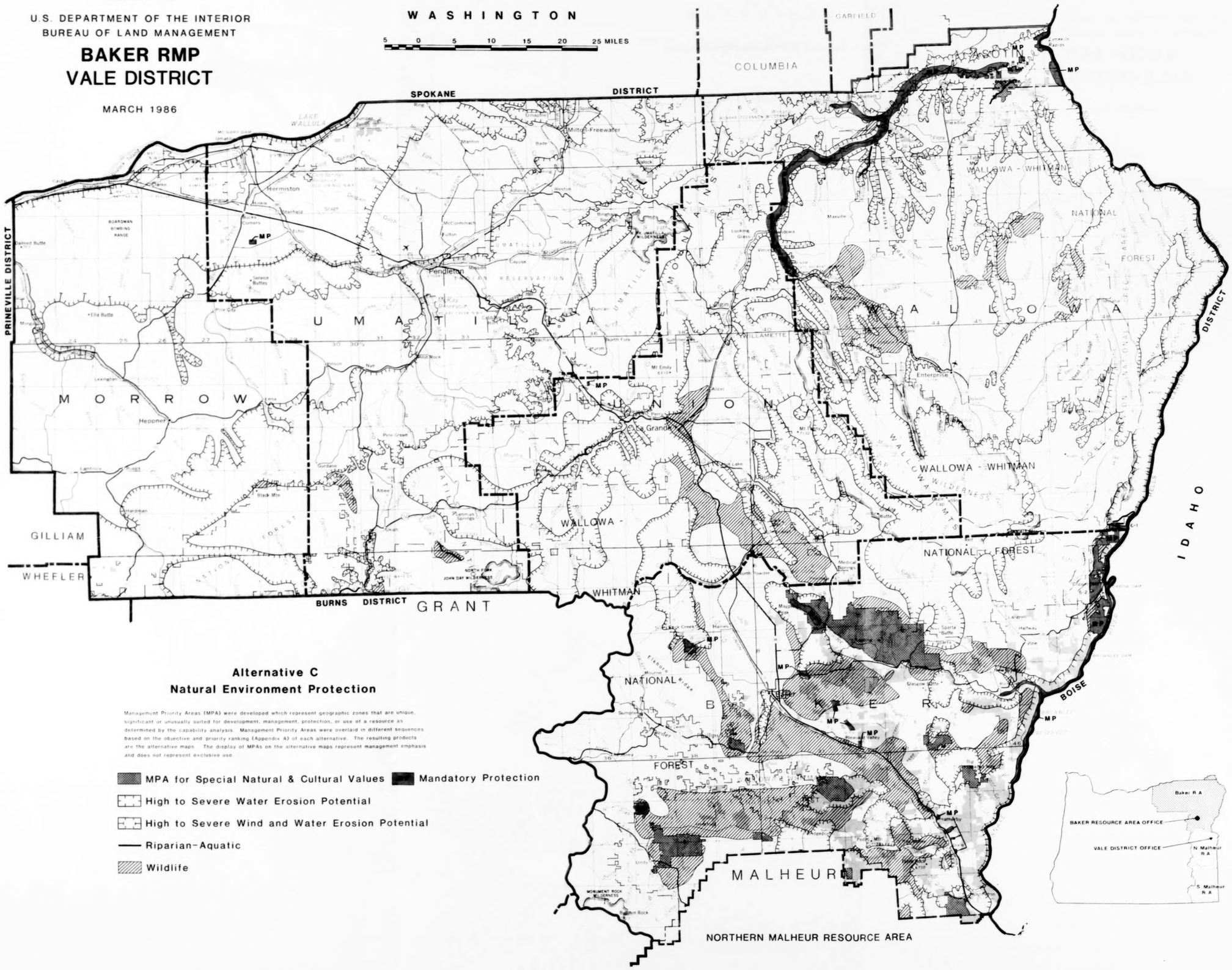
- Mandatory Protection
- Locatable Minerals
- Commercial Forest Lands
- Grande Ronde Special Recreation Management Area
- Oil & Gas Leaseable Minerals
- Geothermal Leaseable Minerals

MAP 9

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

BAKER RMP
VALE DISTRICT

MARCH 1986



Alternative C
Natural Environment Protection

Management Priority Areas (MPA) were developed which represent geographic zones that are unique, significant or unusually suited for development, management, protection, or use of a resource as determined by the capability analysis. Management Priority Areas were overlaid in different sequences based on the objective and priority ranking (Appendix A) of each alternative. The resulting products are the alternative maps. The display of MPAs on the alternative maps represent management emphasis and does not represent exclusive use.

- MPA for Special Natural & Cultural Values
- Mandatory Protection
- High to Severe Water Erosion Potential
- High to Severe Wind and Water Erosion Potential
- Riparian-Aquatic
- Wildlife

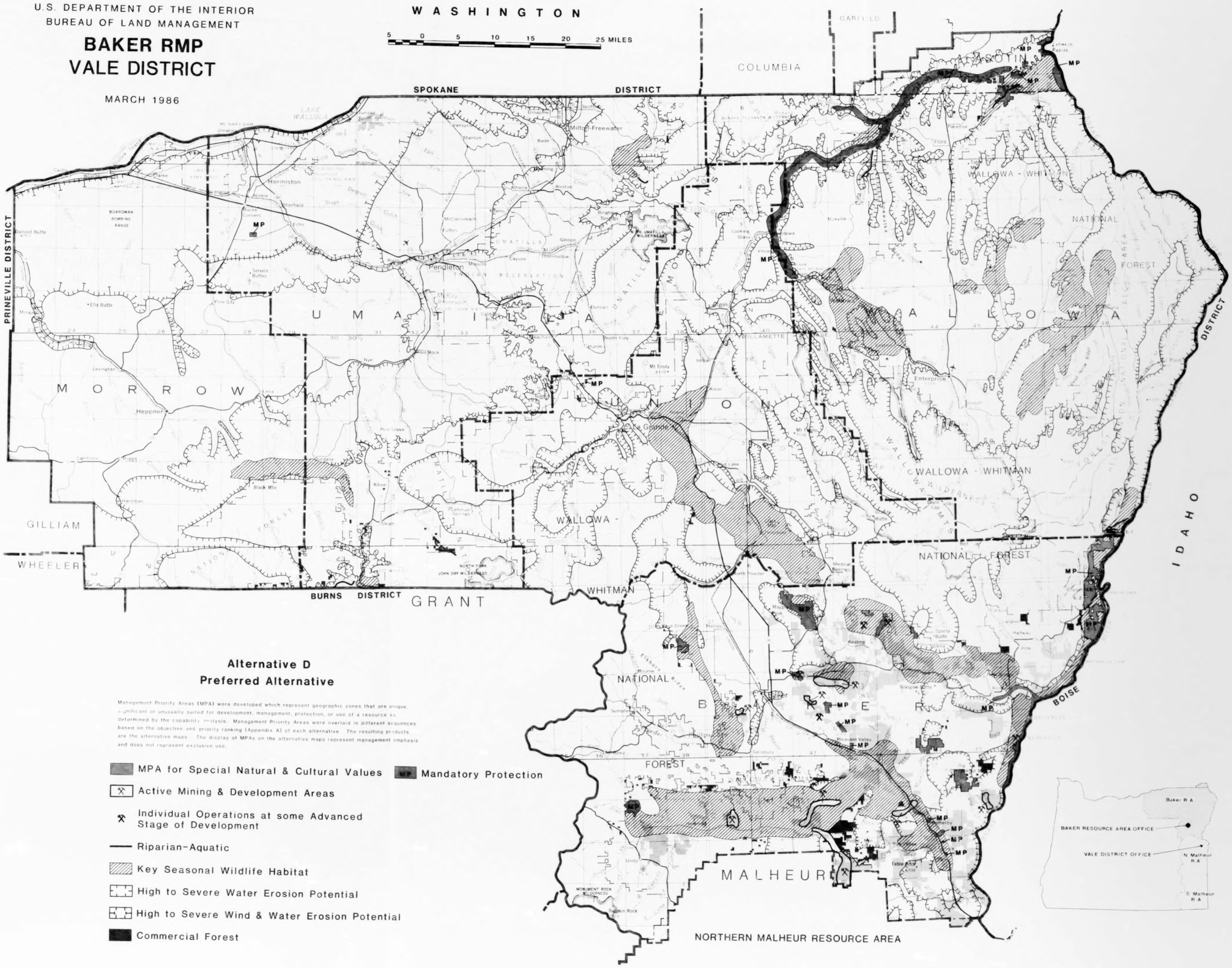
NORTHERN MALHEUR RESOURCE AREA

MAP 10

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

BAKER RMP
VALE DISTRICT

MARCH 1986



Alternative D
Preferred Alternative

Management Priority Areas (MPA) were developed which represent geographic zones that are unique, significant or unusually suited for development, management, protection, or use of a resource as determined by the capability analysis. Management Priority Areas were overlaid in different sequences based on the objective and priority ranking (Appendix A) of each alternative. The resulting products are the alternative maps. The display of MPAs on the alternative maps represent management emphasis and does not represent exclusive use.

- MPA for Special Natural & Cultural Values
- MP Mandatory Protection
- Active Mining & Development Areas
- Individual Operations at some Advanced Stage of Development
- Riparian–Aquatic
- Key Seasonal Wildlife Habitat
- High to Severe Water Erosion Potential
- High to Severe Wind & Water Erosion Potential
- Commercial Forest

NORTHERN MALHEUR RESOURCE AREA